

THE UNIVERSITY OF ALBERTA

PSYCHOSOCIAL INFLUENCES ON MALE INVOLVEMENT IN PHYSICAL ACTIVITY
AT MID-LIFE: THEORETICAL CONSIDERATIONS

by



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DEDICATION

In loving memory of my mother,

MARY KATHERINE DIXON

(April 5, 1934 — April 5, 1983)

She is with me always

ABSTRACT

The purpose of this study was to investigate the relationship between the advent of middle-age in men, and involvement in regular physical activity. Middle-age and fitness, identity, and coping with stress were examined in detail in an attempt to identify the basis of a theoretical perspective with which male involvement in physical activity, at mid-life, could be considered.

The project was based on thirty-eight men aged between thirty-five and forty-five. Data were obtained with the use of a focused interview, which also included two questionnaires; one related to identity, the other to stress and coping. In addition, each man rated his body-composition, cardiovascular functioning, muscular endurance and flexibility in relation to other men of the same age. At a later date, each man underwent a standardized test of physical fitness, based on the four dimensions of fitness identified above. Finally, eight men, chosen as a result of their different levels of involvement in physical activity, provided detailed descriptions of the events of a 'typical day'.

The adoption of this multi-faceted approach resulted in the identification of four groups of men. The eleven *Perennials* had been involved in physical activity for many years, and it occupied a central place in their lives. After years of sedentary living, nine *Adopters* had increased their involvement in physical activity as they had reached middle-age. The eleven *Rejectors*, although aware of the physiological and psychological benefits commonly associated with involvement in physical activity, had been relatively inactive for many years. Finally, having previously led active lives, seven *Relegators* had each decreased their involvement in physical activity.

The differences established in relation to the patterns of involvement in physical activity were reflected in each of the areas initially identified for investigation. Firstly, the men differed in relation to the ways in which they defined fitness and estimated their levels of

fitness. Differences were also established in relation to the fitness test, and the accuracy with which fitness was predicted. Secondly, for different reasons, involvement in physical activity was an important part of the identities of the men who were regularly involved in physical activity. Thirdly, the men who were regularly active believed that physical activity functioned as a means of reducing stress, and ways in which this was believed to have been accomplished were identified.

The qualitative material obtained from the men who participated in this study, as a whole, contained an underlying emphasis on a number of psychosocial processes commonly associated with men at mid-life, and the process of male adult development. Many comments were made which reflected an increasing awareness of the physiological effects of aging. In addition, it was evident that the majority of the men were engaged in a conscious review and evaluation of both the past and the present. This was expressed in a variety of changes which had been recently made in different aspects of their lives, including those related to physical fitness and physical activity. These changes, and their relationship to fitness, identity and coping with the stress associated with the perceived physical effects of aging, provided a means for viewing participation in exercise in relation to the process of male adult development at middle-age — a perspective not previously utilized in research in this field. It was within this context that a theoretical perspective based on *reinforcement*, *adoption* and *devaluation* was discussed in relation to male involvement in physical activity at mid-life.

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Chapter I

INTRODUCTION

It was a very vivid incident. I had been running for about six months. I was probably running sixty or seventy kilometres a week and I was running with serious runners — although I didn't consider myself a serious runner at the time. I went to a conference and an old friend and I started talking about how I'd started running and we thought "wouldn't it be a real life accomplishment to do something major?" I don't know how it came up, but somebody suggested doing the Boston marathon, and I thought, "Wouldn't it be incredible to run the Boston marathon in the year I turn forty?" One of the benefits of making that goal was I was very afraid of losing the gains I had made during the previous summer and fall and gaining weight. So I decided that if I could keep at it through winter then I would beat my weight problem. I did do that and kept up my training throughout the winter. But the exciting thing was, when spring came around, I found that my speed had increased tremendously. I knew that if I could run sixteen kilometres in under seventy minutes then I would have a chance to qualify for Boston. I did accomplish that in that spring. Then I started to train really hard. I went out and got my training up to a hundred kilometres a week; I started doing two-hour runs every Sunday. Eventually, I ran the Seattle marathon. I did qualify for Boston — by the skin of my teeth — and that was just a real high. I mean, I can still remember the agony of that hotel room in Seattle. Just sitting there thinking, "I did it, I really did it". I don't know if I've ever had as deep and strong a feeling of satisfaction as sitting exhausted in that hotel room. With all the PhD and appointments and all that crap, it was almost as if it was the most satisfying thing that I had ever done. I think it was because it was me, it was only me. It wasn't the luck of the draw or the result of all the fortuitous things that can happen in life. I went out and I trained and I did it. It was my accomplishment. The following spring I ran in Boston and that was like a celebration. I didn't really train tremendously hard for it, but I did reasonably well. But the goal was to be there and celebrate it and that's what I did.

The passage presented on the previous page was taken from an interview with one of the men included in this study. The content poses a number of important questions for those interested in the participation of men in regular physical activity. It also provides some initial answers.

The first, and perhaps most fundamental question, is related to why this man started his involvement in running. Several comments indicated that the perception of regular exercise as a means of alleviating a 'weight problem' was of central importance in the decision to pursue this course of action.

The second question is related to why this man would aspire to compete in the Boston marathon. Once again, a concern with weight appeared to be important. The setting of a goal provided a means to ensure that gains which had been made in weight loss, and running performance, would not be lost over the months of winter. Secondly, the aspiration appeared to provide an incentive to increase the level of involvement in running and, in the process, the man became a *serious runner*. Thirdly, the completion of the Boston marathon, at the age of forty, was perceived to be a 'real life accomplishment'. Irrespective of its origins, the aspiration to compete at Boston proved to be intense, and resulted in a commitment to run one hundred kilometres a week, and travel across the country in an attempt to qualify for the race.

A third question is related to why the realization of the goal to qualify for the Boston marathon, by completing *another* marathon within a specified time limit, would prove to be 'the most satisfying thing that I have ever done'. In view of completing a doctoral degree, and gaining tenure within a university, this was acknowledged to be high praise. The rationale provided for this belief was based on the perception that 'it was me, it was *only* me'.

In view of attempts by governments and various other organizations to persuade inactive people to become more involved in activities such as running, the extent to which the principles underlying this situation were idiosyncratic is of great importance. If the principles

were not idiosyncratic, then they could be expected to be prominent in current conceptualizations of men involved in regular physical activity. However, this does not appear to be the case, as illustrated by the comments made in a recent summary of factors associated with exercise involvement.

Those who take up exercise are likely to live or work close to the exercise location; to have a family which supports their involvement; to believe themselves capable of continuing with a programme of exercise; and to be convinced of the benefits of exercise Those who continue with exercise programmes can also be distinguished from those who begin and then drop out. Maintainers, assessed before they begin exercising, are leaner, lighter and less likely to smoke than drop-outs Maintainers are also characterized as 'self-motivated', able to make plans and stick with them when things get tough There is speculation that some maintainers become addicted to exercise, possibly through the body's production of morphine-like chemicals which produce a feeling of euphoria.

(Owen and Lee, 1984, p.18-19)

The characteristics identified above may be associated with men who are regularly involved in exercise. They are not specifically directed towards middle-aged men who are involved in exercise. However, it is apparent that they do not provide a particularly good characterization of a man who, after initially being overweight and inactive, increased his involvement in running to the extent where he completed the Boston marathon. The failure of this description to accurately represent this case is not surprising. There are other indications that few conclusions can be drawn about men who initiate and maintain involvement in regular exercise.

The decision to exercise (or not to) is probably a product of abstract conceptual beliefs (thoughts) and concrete sensory perceptions (feelings) that a person brings to or experiences during exercise. These likely interact with situational factors in the exercise setting, some of which may be readily changed. Others are largely environmental characteristics or personal traits that are difficult to alter The association between regular exercise and health is perhaps outweighed only by our lack of understanding about the factors that determine whether or not people exercise.

(Dishman, 1984, p.422-423,432)

As a result of the apparent lack of understanding associated with participation in physical activity, the traditional emphasis on psychological, biological and situational characteristics

influencing involvement in exercise has been intensified. Psychological factors which have been studied include traits such as self-motivation, extraversion/introversion, 'Type-A' behaviour, perceived exertion and attitudes and beliefs about exercise involvement. Biological characteristics which have been studied include body-composition, aerobic fitness and susceptibility to coronary heart disease. Situational characteristics, including those related to 'lifestyle', the exercise setting, and various behaviour change strategies have also been examined. The combined influence of these factors has recently formed the basis of a conceptual model, proposed by a leading researcher in this field, for the consideration of exercise adherence (Dishman, 1984). Various aspects of such a model may result in more reliable identification of factors *associated* with involvement in exercise. However, this may not necessarily result in an understanding of *why* involvement in regular exercise may be initiated and maintained.

It could certainly be argued that a situation in which an overweight, inactive, middle-aged man began running and ultimately completed a Boston marathon was highly idiosyncratic. However, such an argument finds little support in the increasing body of research which has suggested that large numbers of men significantly increase their involvement in physical activity at mid-life (Hepworth and Featherstone, 1982). Although circumstances may differ, it is unlikely that there are not similarities between men in relation to the influence of underlying processes. In view of the inability of traditional approaches to explain this phenomenon, a different perspective appeared to be required.

An area of research which has virtually been ignored by researchers who have investigated involvement in physical activity is that of its relationship to life-span developmental psychology. This area of research is concerned with the description, interpretation and explanation of developmental processes which occur between conception and death (Baltes, Reese and Lipsitt, 1980). An aspect of this field of research which has received an increasing amount of attention in recent years is based on the belief that psychosocial

development continues throughout adulthood. This approach can be viewed as an extension of the work of the early psychoanalysts. More recently, an elaborate conceptualization of the process of male adult development was proposed (Levinson, Darrow, Klein, Levinson and McKee, 1978). The theory was based on the observation that the life structure of a man evolves through a relatively orderly sequence of 'structure-building' and 'structure-changing' during the adult years (Levinson, 1981). This theory of male adult development has been extremely influential since its publication, and has resulted in a great deal of attention being directed towards the concept of a male *mid-life transition* (Levinson, 1977).

Different views of the male at mid-life have resulted in a lack of agreement over how the period can best be characterized (Farrell and Rosenberg, 1981). A number of authors have argued that the period can be regarded as a period of peak development for men (Nicholson, 1980; Lowenthal, Thurnher and Chiriboga, 1975; Neugarten, 1968). The more predominant view considers mid-life to be a period of transition, struggle and, in many cases, crisis (Levinson et al., 1978; Brill and Hayes, 1981; Mayer, 1978), a 'peak' in life, or as a time of 'crisis' (Farrell and Rosenberg, 1981). However, there is general agreement in the literature that the period is associated with a primary need to establish a differentiated sense of identity. This idea was central in early work in this field (Jung, 1933; Erikson, 1960). A number of factors have been considered instrumental in the centrality of identity at this time of life. A central influence is an increasing awareness of the finiteness of life (Neugarten, 1979). The fortieth birthday is commonly regarded as a 'milestone'. However, the achievement of this important marker is usually associated with increasing concerns about age, relationships, occupation, and changes in body shape and appearance (Medinger and Varghese, 1981). The finiteness of existence is further emphasized with the realization of the cyclical nature of the life-cycle and the inevitability of death (Lifton, 1976; Jaques, 1965).

Aspects of identity are considered central to the mid-life transition, as past achievements and failures, and the expression of valued talents and abilities are reviewed.

The life structure again comes into question. It becomes important to ask: "What have I done with my life? What do I really get from and give to my wife, children, friends, work, community — and self? What is it I truly want for myself and others?" A man yearns for a life in which his actual desires, values, talents and aspirations can be expressed.

(Levinson et al., 1978, p.60)

This process of introspection typically results in a realignment of choices and priorities in life (Levinson et al., 1978). Although the manifestation of changes in the life structure may range between dramatic and subtle, all have important implications for the expression of identity.

From the perspective provided by the process of male adult development, reconsider the participation in exercise of a man who, in his late thirties, was overweight and inactive. The initial involvement in running appeared to be as a result of a concern about a 'weight problem'. This concern had not prompted an increased involvement in exercise earlier in life. However, at mid-life, combined with a consideration of physical fitness, it appeared to be of increasing importance. This was further demonstrated by the stress and anxiety which were associated with the fact that 'I was very afraid of losing the gains I had made'. The aspiration to compete in the most prestigious marathon in the world has important implications in relation to the concern to establish a differentiated sense of identity — to even qualify for the race is a distinction. The distinctiveness is further emphasized when combined with the symbolism of completing the race 'in the year I turn forty'. In addition, a commitment to the training, and the completion of the race, seemed to be associated with an identity as a *serious runner*. Finally, satisfaction of the achievement of a 'real life accomplishment' appeared to have many implications for the life of a middle-aged man. These were aptly summarized with an emphasis on identity. *It was me, it was only me.*

It is evident that an application of the ideas related to the process of male adult development provide a highly generative perspective from which to examine the involvement of middle-aged men in regular physical activity. However, as previously indicated, the use of this perspective in previous research related to involvement in exercise has been virtually

non-existent.

STATEMENT OF THE PROBLEM

Research related to the process of male adult development has indicated that the middle-years of life are associated with an increasing awareness of the parameters of existence, and may be characterized by a review of the past, and resultant modifications to various aspects of life (Levinson et al., 1978). This process may be stressful, and research related to male adult development has identified the centrality of a concern with identity and physical deterioration at around the age of forty (Levinson et al., 1978). Consequently, this study was designed to investigate the relationship between the advent of middle-age in men and involvement in regular physical activity. The central purpose of the study was to attempt to provide a theoretical framework within which male involvement in physical activity, at mid-life, could be considered.

In order to accomplish the aims of the project, four primary areas of investigation were identified. ¹ From a psychosocial perspective, the first related to the examination of the level and stability of involvement of middle-aged men in regular physical activity.

The second field of study focussed on a number of areas related to physical fitness. Firstly, the way in which fitness was defined by middle-aged men was considered. Secondly, levels of physical fitness, self-perceptions of physical fitness, and the relationship between the two, were examined.

The third area of investigation was associated with an examination of the ways in which involvement in physical activity may contribute to the identity of a middle-aged man. An important facet of this process was identified as the relevance of concerns related to body shape and appearance.

.....
¹The research leading to the identification of these areas of investigation is reviewed in detail in Chapter II.

The final area to be examined centred on the relationship between involvement in physical activity and stress. The extent to which physical activity was associated with a reduction in stress, in the lives of middle-aged men, was examined. In addition, in view of the research related to male adult development which has indicated that mid-life can be a stressful period of life, an attempt was made to investigate ways in which involvement in physical activity may act to ameliorate the reduction of stress.

JUSTIFICATION FOR THE STUDY

The association between vigorous exercise and certain aspects of mental health is well documented. Explanations for this relationship are not well understood, however, and recent developments in sport psychology suggest a renewed interest in health-related topics. Paradoxically, the more fundamental or prerequisite issue of exercise adherence has received little attention from a psychological perspective. Moreover, the research related to adherence has tended to be atheoretical and unsystematic.

(Dishman, 1982, p.166)

There can be no argument that, throughout North American society, there has been an unprecedented and very rapid increase in the emphasis placed on physical fitness and involvement in physical activity. However, research related to one aspect of this phenomenon, involvement in regular physical activity, has not progressed at such a rapid rate. This is clearly demonstrated in the comments presented above, made by a leading researcher in the field of exercise adherence. The need for theoretical approaches to involvement in exercise from a psychological perspective was emphasized. This study was designed as an initial attempt to meet this need.

An increased understanding of the reasons why middle-aged men become involved in physical activity is also important in relation to the promotion of involvement in physical activity. Without adequate theoretical and empirical bases, it is unlikely that efforts to promote

involvement in exercise to middle-aged men, or to the population in general, will be successful. Past research provides clear testimony to this assumption.

Continued and concerted efforts have been made by several governments, and various other organizations, to encourage regular involvement in exercise. However, it is extremely difficult to gauge the success of these ventures. Undoubtedly, the *emphasis* on physical fitness and physical activity in society has increased. However, the research related to *rates of participation in exercise* is more equivocal. The results of a relatively recent nationwide survey of fitness indicated that 56% of Canadians aged ten and over were active during their leisure time (Canada Fitness Survey, 1983). Unfortunately, results broken down by age and sex were not published in the survey report. The utility of the results was further limited by the obscurity associated with the way in which 'active' was defined for use in the study. 'Participation' in an activity was defined as 'at least one occurrence in the 12 months prior to the survey' (Canada Fitness Survey, 1983, p.9). If similarly minimal criteria were applied to the definition of *active*, the results of the survey could not be considered an accurate estimation of Canadians, including middle-aged males, who were regularly involved in physical activity.

A recent nationwide survey conducted by the Australian National Heart Foundation produced results markedly different from those obtained in Canada (Owen and Lee, 1984). The researchers concluded that 60% of adult men engaged in vigorous activity once a month or less. In addition, the findings of the study indicated that only 16% of adult men exercised at a sufficient level of exertion and with sufficient regularity, to achieve conditioning of the cardiovascular system. These results appear to be more closely allied to the consistent finding that the majority of the general population is not particularly active, and involvement in exercise programmes is marked by high rates of attrition (Dishman, 1984).

There are many practical implications associated with an increased understanding of the reasons why middle-aged men initiate and maintain involvement in regular physical activity. These implications have particular relevance for four groups. Firstly, an awareness of central

issues in this area would provide a needed focus for the designers of programmes of regular exercise. The members of this group range from those working at a national level to those designing fitness programmes within a small private enterprise. The second major group to benefit from an increased understanding of the reasons why middle-aged men become involved in exercise would be the increasing numbers of counsellors who are working in a variety of situations. It is, perhaps, at this level that the greatest gains can be made. A knowledgeable and sensitive counsellor, with the relevant information, would be in an ideal position to recommend, supervise and modify an appropriate exercise programme. In a similar manner, instructors working in the wide variety of exercise facilities which are currently available would also have an excellent opportunity to effectively monitor progress in a fitness programme. Last, but by no means least, it would seem logical to conclude that middle-aged men would benefit from better designed programmes, more effective fitness counselling, and more knowledgeable supervision.

There is one final area in which a justification for this study can be found. Presumably, a primary objective of all scientific research is to contribute to the understanding of the problem under investigation. However, it seems that the majority of scientific studies identify problems rather than solve them. This research project will have accomplished its underlying objectives if it results in other researchers adopting and combining improved perspectives and improved techniques in order to study the involvement in exercise of people of all ages and both sexes.

METHODS AND PROCEDURE

METHODS

Studies which have investigated involvement in regular physical activity have generally relied on a research paradigm which has resulted in a descriptive level of analysis. Adherers to an exercise programme have been contrasted with those that failed to adhere to the programme

and the two groups have been compared on the basis of demographic, biological and psychological variables. A reliance on this paradigm, which has focussed on group differences, has resulted in very little examination of the individual processes which may contribute to regular involvement in exercise. Exceptions to the utilization of this approach, in this field of study, have been very few. One project, related to exercise counselling, was based on a case study approach (Turner, Pooley and Sherman, 1976). However, the level of analysis employed was purely descriptive. Another study, which provided a valuable comparison between active and inactive men, was based on focussed interviews (Burgess, 1973). However, the potential utility of approaches of this kind to the study of involvement in exercise has been greatly overshadowed by a reliance on the research paradigms traditionally used in research in this field.

A variety of approaches have been adopted in order to study psychosocial development. Initial approaches were marked by an emphasis on an examination of theoretical issues rather than empirical research (Freud, 1905; Jung, 1933; Erikson, 1960). However, more recently, a variety of research strategies have been adopted. A remarkable forty-year longitudinal study of intrapsychic adaptational styles was based on interviews and questionnaires (Vaillant, 1977). Detailed questionnaires have been utilized with large numbers of people to identify salient, age-related concerns (Gould, 1978). Lengthy interviews have also been used to study the issues of middle-adulthood (Neugarten, 1975). The most comprehensive study of the process of male adult development resulted from the evolution of a number of biographical reconstructions (Levinson, 1981). These were based on extensive, open-ended interviews.

Prior to the selection of the research techniques to be adopted for use in this study, the approaches traditionally utilized in studies related to exercise involvement and studies focussing on male adult development were considered. Research related to involvement in regular exercise, based on quantitative research strategies, has indicated that certain physiological and psychological characteristics are associated with involvement in physical activity. However, an

emphasis on subjective experience, typical of work which has focussed on male adult development, has been missing from research related to exercise involvement. Consequently, a decision was made to adopt a multi-faceted approach of that type. Further, the belief in the utility of combining a variety of research strategies was based on the view that both quantitative and qualitative research are potentially complementary (Dunn, 1983). The combination of different research strategies has been advocated as a means of minimizing the weaknesses of each technique, and maximizing inherent strengths (Denzin, 1978).

The lack of theory and innovative research in relation to involvement in physical activity required the identification of an appropriate design with which different techniques could be implemented. In view of the multi-dimensional nature of the process under investigation, a case study approach was adopted. The 'case study', based on an analysis of single or multiple cases, has been described as an extremely useful method of research in the social sciences (Yin, 1981). The strength of the case study as a research technique is derived from the variety of sources from which data relevant to the topic of investigation are obtained (Dunn, 1983). The practical demands of this kind of research also require the distinction between research findings based on case studies, and those resulting from positivist approaches to scientific inquiry.

Case studies of whatever form are a reliable and respectable procedure of social analysis and much criticism of their reliability and validity is based on a misconception of the basis upon which the analyst may justifiably extrapolate from an individual case study to the social process in general. A good deal of the confusion has arisen because of a failure to appreciate that the rationale of extrapolation from a statistical sample to a parent universe involves two very different and even unconnected inferential processes — that of statistical inference which makes a statement about the confidence we may have that the surface relationships observed in our sample will in fact occur in the parent population, and that of logical or scientific inference which makes a statement about the confidence we may have that the theoretically necessary or logical connection among the features observed in the sample pertain also to the parent population.

(Mitchell, 1983, p.207)

The adoption of a case study approach for use in this study was based on the aim of

demonstrating a *logical* relationship between male involvement in physical activity and the advent of middle-age. Every attempt was made to substantiate such a relationship with empirical evidence. However, the extent to which the men who were included in the study were representative of a general population precluded the generalization of findings.

INSTRUMENTATION

In order to obtain information from the four identified areas, four primary sources were identified. These included a focussed interview, questionnaires, self-rating scales, and a standardized test of physical fitness.

The interview included a total of eighteen open-ended questions (see Appendix 1: *Interview Schedule*). The questions included for use in the study were derived as a result of modifications to an initial interview format developed for use in a small pilot study. The questions used in the project were based on the four primary areas of investigation identified for study.

Firstly, eleven questions were related to various aspects of involvement in physical activity. One question focussed on the frequency, intensity and duration of involvement in exercise. The decision to assess level of involvement in physical activity with the use of an open-ended question was made after a review of the wide variety of scales which have been developed for this purpose. The majority of these scales are long and tedious, and typically provide results based on metabolic demands associated with the reported level of involvement (Taylor, Jacobs, Schucker, Knudsen, Leon and Debacker, 1978). A related question examined the stability of this involvement within the period several years prior to the interview. Two questions were concerned with the perceived importance of physical activity, and the extent to which this perception had changed in the years preceding the interview. Two questions were concerned with the aspects of involvement of physical activity perceived to make it most attractive, and those perceived to make it least attractive. Two questions were also included to

examine aspects of life which were considered to facilitate, and inhibit, involvement in regular exercise. The final three questions related to involvement in exercise addressed the promotion of physical activity, its effectiveness, and ways in which it could be improved.

The second area of investigation was concerned with *fitness*, and two related questions were posed. The first focussed on the definition of fitness. The second was associated with the frequency with which personal levels of fitness were considered. The third area to be examined was related to the influence of perceptions of body shape and appearance on *identity*. Consequently, one question was concerned with the frequency with which body shape and appearance was considered, and another with the stability of these perceptions over the several years prior to the interview. Finally, the fourth area in which open-ended questions were posed was related to the relationship between involvement in physical activity and the reduction of *stress*. Three related questions were included in the interview schedule. Firstly, the extent to which physical activity was perceived to contribute to coping with stress was examined. Secondly, the extent to which such a relationship was consciously exploited was considered. Thirdly, a question related to the effects of restriction from involvement in exercise was also investigated.

The second source of information resulted from the use of two questionnaires which were included in the study. The first was a 'Who am I?' test, designed to generate a conception of personal identity (Kuhn and McPartland, 1954). The completion of this instrument formed the first part of the interview (see Appendix 1: *Interview Schedule*). The test has been widely used in research related to self-concept and identity, and was included in this study in order to gauge the centrality of physical activity to identity. Further description of the development and use of the instrument, together with the results of its use, can be found in Chapter V.

The second questionnaire was included to measure the *sense of coherence*, which is based on the belief that a particular style of orientation to life is an important influence in coping with stress and determining health status (see Appendix 2: *Orientation to Life*). The

questionnaire developed to measure the *sense of coherence* has been shown to have a reliability index of 0.847, and has been shown to be highly correlated with self-estimated levels of health (Antonovsky, 1982). The *sense of coherence*, its component dimensions, and its use in this study, are described in Chapter VI.

The third source of information emanated from the implementation of self-rating scales related to various dimensions of physical fitness, body shape and appearance (see Appendix 1: *Interview Schedule*). Each scale consisted of a ten point continuum anchored with 'High' and 'Low'. The scales related to fitness were concerned with ratings of body-composition, cardiovascular functioning, muscular endurance and flexibility. The scale related to the evaluation of physique focussed on reported levels of satisfaction with body shape and appearance. More detailed discussion of the use of the scales related to self-ratings of fitness, and body shape and appearance, can be found in Chapter IV and Chapter V respectively.

The fourth and final source of information associated with the case studies was related to performance on a test of physical fitness. The test selected for inclusion in the project was based on the dimensions of body-composition, cardiovascular functioning, muscular endurance and flexibility. With the exception of the measurement of cardiovascular functioning, the fitness test reflected the testing protocols developed for use in the Standardized Test of Fitness (Canada Fitness Survey, 1983). Further description of the development and use of the test, together with the results of its use, can be found in Chapter IV.

OPERATIONAL DEFINITIONS

<i>body composition</i>	Body-composition was regarded as the relationship between lean body mass and fat tissue.
<i>cardiovascular functioning</i>	Cardiovascular endurance referred to the combined efficiency of the respiratory system in taking in oxygen, the circulatory system in delivering the oxygen to the muscles, and the utilization of the oxygen

by the muscles to produce energy. For the purposes of this study, predicted maximal oxygen uptake was used to estimate cardiovascular endurance.

<i>coping</i>	Coping was defined as the combination of the appraisal of a potentially stressful situation, and the reliance on appropriate coping responses to successfully reduce the anxiety associated with such a situation (Moos and Billings, 1982).
<i>existential</i>	An existential perspective was considered to be based on the search for, and establishment of, <i>meaning</i> in life (Kobasa and Maddi, 1977).
<i>flexibility</i>	Flexibility was defined as the extent of maximum trunk flexion.
<i>hardiness</i>	Hardiness was considered to be an overall style of stress resistance composed of three interlocking dimensions: <i>commitment</i> ; <i>control</i> ; and <i>challenge</i> (Kobasa, 1982).
<i>identities</i>	Identities were defined as a set of attributes associated with a specific set of social relationships, based on a cluster of related meanings. Discrimination between the importance of various <i>identities</i> can be made based on the perceived centrality of the identity under consideration to <i>identity</i> .
<i>identity</i>	Identity was defined as the compilation of a myriad of <i>socially defined identities</i> .
<i>middle-age</i>	In past research, the boundaries of middle-age have extended between the ages of thirty-one and sixty-five (Medinger and Varghese, 1981). In this study, <i>middle-age</i> and <i>mid-life</i> were used interchangeably to denote the period between thirty-five and forty-five years of age.
<i>muscular endurance</i>	Muscular endurance was considered to be the ability of a muscle group to perform repeated contractions over a period of time. For the purposes of this study, an assessment of the ability to complete sit-ups and push-ups was considered an estimate of muscular endurance.
<i>physical activity</i>	Physical activity was defined as any voluntary vigorous activity, structured or unstructured, of a sporting or recreational nature. <i>Physical activity</i> and <i>exercise</i> were used interchangeably throughout this dissertation.
<i>physical fitness</i>	Physical fitness was defined as the combination of body-composition, cardiovascular functioning, muscular endurance and flexibility.

regular physical activity

Regular physical activity was defined as *physical activity* occurring three or more times a week for a duration of at least thirty minutes. *Regular physical activity* and *regular exercise* were used interchangeably throughout this dissertation.

self

Self and *self-concept* were used interchangeably to denote the compilation of a myriad of *self-defined subselves*.

self-assessed physical fitness

Self-assessed physical fitness was defined as the combination of self ratings, in relation to other middle-aged men, on body composition, cardiovascular functioning, muscular endurance and flexibility.

self-esteem

Self-esteem was defined as a personal judgement of worthiness that is expressed in the attitudes that an individual holds toward himself. (Coopersmith, 1967).

self-evaluation

Self-evaluation was defined as the evaluation of all characteristics, associations and implications of a particular *subself*.

sense of coherence

The sense of coherence was regarded as a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that one's internal and external environments are predictable and that there is a high probability that things will work out as well as can reasonably be expected (Antonovsky, 1979). The sense of coherence has three component dimensions: *meaningfulness*; *comprehensibility*; and *manageability* (Antonovsky, 1982).

stress

Stress was regarded as the relationship between demands made on an individual, and the power of the individual to deal with them without unreasonable or destructive costs (Coyne and Holroyd, 1982).

subselves

Subselves were defined as the set of characteristics, perceived by an individual, to be associated with particular roles, functions and relationships. Discrimination between *subselves* can be made by an individual in relation to the distance from the most highly-valued aspects of *self*.

SAMPLE

The project was based on information obtained from thirty-eight men between thirty-five and forty-five years of age, who were full-time staff members at a large Canadian

university, and who completed both the interview and the test of physical fitness. The average age of the group was 40.07 years, with a standard deviation of 3.24 years. University staff were chosen for inclusion in the study in view of the costs associated with the fitness test. As a result of a staff-association agreement, each full-time academic staff member was eligible for a remission of the fees associated with the fitness test offered by the University Fitness Unit.

In order to recruit men with a wide range of involvement in regular physical activity for the study, an advertisement was placed in the bi-weekly staff magazine for three consecutive weeks (see Appendix 3: *Advertisement*). The advertisements began appearing in spring, immediately after final exam returns were required. The advertisements produced two responses, from men who were not full-time academic staff-members. Although these men were not eligible for the remission of fees associated with the fitness test, the Fitness Unit graciously completed their fitness tests without charge, and each man was included in the study. In order to recruit more men for the study, thirty names were obtained from the director of the University Staff Fitness and Lifestyle programme. Each of these men was, at the time, a past or current participant in the programme. A letter of introduction was mailed to each man and was followed-up by telephone (see Appendix 4: *Correspondence*). This approach produced one additional man for the project. Many were outside the range of ages required and others did not respond to the letter or persistent attempts to establish contact by telephone. However, names of male academic staff within the desired age range were requested, and a 'snowballing' of referral, telephone contact, letter circulation, and recruitment eventuated (see Appendix 4: *Correspondence*). Men in eighteen different university departments were contacted. In view of the nature of the study, a sample of forty men was believed to be adequate. After many hours of persistent telephone use, forty-six interviews were arranged. Twelve men did not meet these appointments, and four men did not meet rescheduled interviews. For personal reasons, one man requested that the interview be terminated. This resulted in the completion of forty-one interviews.

Each man had the opportunity to utilize exercise facilities available at the university. These included two swimming pools, a gymnasium, a weight-training room, an ice-rink, squash and racquetball courts, an indoor athletic track and facilities for basketball, tennis and various other court sports. The university was situated near a river valley, with access to a number of picturesque and secluded trails which were used by runners and seasonally by cyclists and cross-country skiers. In addition, a well-organized *Staff Fitness and Lifestyle* programme provided leadership and instruction in various fitness activities in the early morning, lunch hour, and late afternoon. As university staff these facilities were available on an unlimited basis. Lockers, showers and towel service were provided for a nominal fee.

PROCEDURE

Each man was interviewed, privately, in his office. The *Who Am I?* test was used to begin each interview and it appeared to work well as a means of introduction. The completion of this part of the interview was followed by the presentation of the open-ended questions and self-rating scales in the order reflected in the *Interview Schedule* (see Appendix 1). At the conclusion of the interview, each man was asked to complete the *Orientation to Life* (Sense of Coherence) scale. Each interview was unobtrusively tape-recorded after permission had been gained and the confidentiality of all material had been assured.

The time taken to complete the interviews varied greatly between the men. The shortest interviews lasted approximately forty minutes. However, the majority took much longer. In six cases previous commitments of the respondents required the arrangement of a second meeting in which the interview could be completed. The longest interview lasted, over two sessions, for almost four hours. The open-ended format chosen for use in the study produced a wide range of responses. In some cases, answers were monosyllabic. In others, the questions were the beginning of a lengthy conversation in which a variety of other questions were subsequently posed. This appeared to be a major strength of the research techniques chosen for the study.

An inherent flexibility resulted in a wealth of qualitative material.

At the conclusion of the interview, each man was informed of the booking processes associated with the fitness test. In view of the steady demand for fitness tests at the University Fitness Unit, each man was asked to telephone and make an appointment at his earliest convenience. Each man agreed to take the test. Every attempt was made to ensure that the evaluation of fitness was conducted as soon as possible after the completion of the interview. A written reminder was circulated to the men who had not made an appointment at the fitness unit within seven days of their interview (see Appendix 4: *Correspondence*). In sixteen cases, follow-up telephone calls were required. Despite these interventions, the time between the interview and the fitness evaluation ranged between five and forty-seven days, with an average delay of 19.6 days. Each fitness evaluation lasted approximately one hour, and was conducted by a qualified fitness appraiser. Three men who completed the interview did not subsequently complete the fitness test. Consequently, the information contained in their interviews was excluded from further analysis.

DATA ANALYSIS

The raw data obtained from each of the men in response to the open ended questions posed in the interview were transferred, through transcription, from cassette to a number of computer files. An initial review highlighted the breadth of the information which was provided. In particular, it was evident that there was a great deal of overlap in the data obtained from the answers to different questions. In many cases, the responses contained far more information than that which could be considered pertinent to a specific question. In order to maximise the potential value of such a situation, computer files were generated based on the four themes identified for study in the investigation. Consequently, material which was related to issues of *involvement in physical activity, fitness, identity, and stress* was grouped. In addition, a fifth file, associated specifically with responses which reflected extremely high levels

of involvement in *running* was created. There were many ways in which the qualitative material obtained in this study could have been analyzed. Grouping the responses according to five primary themes appeared to provide the greatest opportunity to accurately represent the various aspects of involvement in exercise which were described during the interviews.

Responses to the two questionnaires were analyzed in different ways. In view of its inclusion in the study as a means of assessing the centrality of physical activity to identity, responses to the *Who am I?* test were examined for references to physical activity. These responses were identified, and the rank of each was recorded. A description of the further analysis of these responses can be found in Chapter V. Responses to the *Orientation to Life* questionnaire were marked according to the scoring protocol associated with the scale (Antonovsky, 1982). Scores for each man on the *sense of coherence*, and each of its component dimensions, were entered into a computer file for subsequent analysis (see Appendix 5: *Raw Data* and Chapter VI).

The scores obtained from each man in relation to the self-assessment of physical fitness, and those related to the actual measurement of physical fitness were also recorded on computer file (see Appendix 5: *Raw Data*). Correlations between self-assessed physical fitness and measured physical fitness were computed using the SPSSx statistical software package (SPSSx inc., 1983). Pearson Product-Moment correlations were reported. Analysis of variance was also conducted where appropriate, and Tukey (hsd) *a posteriori* statistics were computed. Results obtained on the Tukey (hsd) test were reported in view of its degree of conservativeness, and its applicability in a broad class of situations (Winer, 1971).

DELIMITATIONS

The study was delimited to include full-time, male, university staff members between thirty-five and forty-five years of age. Only those men who agreed to complete both the interview and the fitness test were included in the project.

Men who had undergone a fitness test within a two-year period prior to the study were excluded from the study. This decision was made based on the belief that such a test would influence the accuracy of self-assessed physical fitness.

The study was delimited to the select group of men who were included in the study. No attempt was made to generalize findings to other groups within the general population. The central purpose of the study was to identify the basis of a theoretical perspective with which male involvement in physical activity at mid-life could be considered. Consequently, an emphasis was placed on the need to demonstrate *logical* relationships, rather than establish findings applicable to a general population. This decision was also made in view of the fact that the majority of empirical research related to middle-aged men, and the process of male adult development, has been limited to groups of men with characteristics similar to those of the men who participated in this study.

LIMITATIONS

Every attempt was made to ensure that the time between the interviews and the fitness tests was as short as possible. However, despite these efforts the average time period between the two was 19.6 days. No systematic attempt was made to analyze the relationships between the time lapse between completion of the self-assessed and actual measures of physical fitness.

ORGANIZATION OF THE DISSERTATION

There are many ways in which this dissertation could have been presented. The style ultimately chosen was considered to be the optimal way in which the relationship between male involvement in physical activity and the advent of middle-age could best be demonstrated. A reliance on qualitative material in the report has resulted in the inclusion of many quotes taken from the interviews. These quotes are clearly evident in the text and the specific sources of the

comments are not referenced beyond the context in which they are presented. All names, places, and events described throughout the text have been changed in order to ensure anonymity of the men who participated in the study.

Chapter II provides an overview of research related to the process of male adult development. The contributions of early developmentalists are considered before a comprehensive theory of male adult development is considered in some detail. An examination of the psychosocial characteristics which distinguish middle-aged men from men of other ages precedes the identification of a number of research questions.

The primary focus of Chapter III is the different levels of involvement in physical activity reported by the men who participated in this study. The different levels of involvement in physical activity resulted in the identification of different groups of men within the sample. Profiles of these men, and important characteristics associated with the different levels of involvement in physical activity are discussed in detail.

Chapter IV is initially concerned with the definitions of physical activity which were provided by the men. This is followed by a review of the levels of physical fitness which were established in the tests of physical fitness, and the self-assessments of physical fitness which were obtained at the interviews. The chapter concludes with an examination of the observed relationship between actual and self-assessed fitness.

The contribution of physical activity to identity is the primary focus of Chapter V. The contributions of influential theorists who have written about self and identity are reviewed before the salience of identity to a middle-aged man is considered. Various definitions of contentious concepts are provided before identity, and the contribution made to identity by perceptions of body shape and appearance are discussed.

Chapter VI is directed towards the relationship between involvement in physical activity and stress. In order to place this discussion within a theoretical context, various approaches to

the conceptualization of stress and coping are reviewed. Previous research related to involvement in physical activity and stress is also discussed. The remainder of the chapter is associated with the adoption of an existential perspective in order to consider the way in which men in this study used involvement in physical activity to cope with stress.

The *serious runner* is the focus of Chapter VII. Research related to the concept of 'positive addiction' is reviewed before a detailed biographical description of a man who identified himself as a *serious runner* is presented. The ten characteristics surrounding the acquisition of an identity as a *serious runner* are then identified. The chapter concludes with a comparison of the processes underlying *serious running* with those of anorexia nervosa and the similarities and dissimilarities between these two phenomena are discussed.

Chapter VIII contains a synthesis of the results of the project, and the identification of the basis of a theoretical perspective with which to consider male involvement in exercise at mid-life. The implications of using such a perspective are considered before recommendations for future research are made.

Finally, Chapter IX provides a summary of the project and an overview of the conclusions. In addition, the implications of the findings of the study are considered before a number of recommendations are made.

Chapter II

MALE ADULT DEVELOPMENT

I can't say he's not in good shape. He has the body of a much younger man. All the women at the club are surprised when I tell them my husband is in his middle-forties. But he's gone bananas with his tennis. He keeps going for four hours. His back kills him but he won't admit it When he comes home he goes to sleep. I tell him one hour like a sane person is enough. But no, not him. He makes like he was twenty.

(Davitz and Davitz, 1979, p.89)

INTRODUCTION

Modern North American society abounds with allusions to the male 'mid-life crisis' and its association with broken relationships, garish clothes, sports cars and frantic sexual activity. Many references, such as the one presented above, have also been made in relation to an increase in the frequency and intensity with which some men at mid-life pursue involvement in regular physical activity. However, the majority of the material published in relation to the behaviour of middle-aged men has been anecdotal, and little attempt has been made to interpret observations within the context of existing theories of male adult development. Consequently, the primary objective of this chapter is to examine the process of male adult development in order to identify reasons why involvement in exercise may hold special significance for some middle-aged men.

In an effort to accomplish this aim, attention will be directed towards four areas. Firstly, the work of the early psychoanalysts, who initiated the modern study of personal development, will be reviewed. This will be followed by an examination of a theory of male adult development which has proven to be extremely influential in this field. Thirdly, an emphasis will be placed on conceptualizations of mid-life in order to identify the characteristics of the middle-aged man which distinguish him from other men. A number of important

contributions have been made towards an understanding of the psychosocial processes underlying mid-life, and these will be identified. Finally, an examination will be made of the extent to which current theories of male adult development account for the significance of involvement in physical activity at mid-life.

EARLY DEVELOPMENTALISTS

The earliest contribution to modern developmental theory can be found in the work of *Sigmund Freud*, who described the importance of psychosexual processes in the early part of life (Freud, 1905). The interaction between these processes and the environment formed the basis of the Freudian conception of development. Freud believed that the developmental process consisted of five relatively separate, sequential, overlapping stages. The *oral*, *anal*, and *phallic* stages were associated with early childhood. These were followed by the *latency* period, and the *genital* stage which emerged with puberty. Freud paid little attention to the adult years as a series of further developmental stages. In contrast, he viewed the intrapsychic processes of adulthood to be based on the unfolding of events determined by early childhood experience.

Unlike Freud, *Carl Jung* believed that development was a process that continued throughout life (Jung, 1933). The centre of this process was considered to be the self, which Jung defined as the psychic totality resulting from the unification of both the conscious and the unconscious. Jung believed that the unification of the self becomes more complete as life progresses, as a result of the process of individuation. The age of forty was identified to be a period of great psychological significance, and it was described as the 'noon' of life. Primary characteristics of the period were believed to be a review of the past and an assessment of the way in which life has developed (Jung, 1970). In addition, Jung argued that the period of reflection provided a source of renewed motivation, and the means for discoveries and insights into the self. Although the insights may not always be pleasant, Jung believed that the serious problems of life are never really solved, and that psychological problems are related to a

resistance to growth and change.

Although Freud was instrumental in early developmental theory and Jung was the first developmentalist to write extensively about adulthood, *Erik Erikson* was the first to propose a series of developmental stages to encompass the entire life-course (Erikson, 1950). Erikson extended the view, initiated by Freud, that development results from the interaction of both psychological and social events. The foundation of development was believed to lie in change, rather than stability, and Erikson argued that individuals are confronted with contradiction and conflict throughout life. In view of this premise, Erikson conceptualized life as a progression of eight temporally sequenced steps, with each presenting the opportunity for psychological growth. Each stage constitutes a developmental issue, and is based on a bipolar dimension.

The first five stages: *Trust vs. Mistrust*; *Autonomy vs. Shame, Doubt*; *Initiative vs. Guilt*; *Industry vs. Inferiority*; and *Identity vs. Role Diffusion*, correspond closely with the five stages of development identified by Freud. However, the final three stages, concerned with adolescence until death, appear to reflect the concept of individuation which was described by Jung. *Intimacy vs. Isolation*, was identified as the major developmental task of the third and fourth decades of life. The major focus of this period is the struggle to achieve a physical and emotional intimacy with another individual. At around the age of forty, Erikson argued that the emphasis shifts to a concern with *Generativity vs. Stagnation*. During the fifth and sixth decades of life, generativity was believed to be reflected with an interest in establishing and guiding the next generation. This stage of development is also associated with a need for distinctiveness, and a differentiated identity. Although Erikson argued that an identity crisis is the focal point of adolescence, he also believed that stress later in life could precipitate a renewed concern with issues of identity. The final stage of life is marked by *Integrity vs. Disgust, Despair*. The individual reflecting on a rich and fulfilling life is believed to achieve *ego integrity*, and can accept death as the final stage of life. In contrast, a life perceived to be empty and without purpose results initially in disgust, and ultimately in despair.

THE SEASONS OF A MAN'S LIFE

The work of the early developmentalists provided the basis for the proposal of a comprehensive psychosocial theory of male adult development by *Daniel Levinson* and associates (Levinson et al., 1978). In contrast to previous work in development, Levinson stressed the relationship between the self and the interpersonal world, rather than intrapsychic processes. The theory was predominantly based on the biographies of forty middle-aged men who were drawn from four disparate occupations. As a result of extensive interviewing, a relatively orderly sequence of developmental periods were identified. The central focus of development is considered to be the evolution of the *life structure*; the pattern or design of a man's life at a given time, which is based on relationships between aspects of the self and aspects of the world (Levinson et al., 1978). Three *eras* were identified with which to represent the evolution of the life structure, and each is linked with a range of ages. Although each era was considered to have a distinct bio-psycho-social character, a new era begins as the previous one draws to a close (Levinson, 1981). *Cross-era transitions*, which last for approximately five years, are instrumental during these periods of life.

The four eras of adult life, *Pre-Adulthood* (0-22 years), *Early Adulthood* (17-45 years), *Middle Adulthood* (40-65 years) and *Late Adulthood* (65+ years) are divided into a series of structure-building and structure-changing periods. Pre-adulthood extends from birth until late adolescence, and development proceeds from infancy to the beginnings of an independent adult life. The *Early Adult Transition* begins around the age of seventeen, as the young adult pursues independence and begins to assume a place in the adult world.

Entering the Adult World extends from around the age of twenty-two to around the age of twenty-eight. During this period, the emphasis is on the establishment of an occupation, and the development of relationships, frequently resulting in marriage and family. The period is characterized by two antithetical goals. On one hand is the desire to explore a wide range of alternatives in the major spheres of life. On the other, is an emphasis on the development of a

stable life structure (Levinson et al., 1978). The *Age Thirty Transition* (28-33) is associated with the review and modification of the life structure formed in the previous period of life. The transitional period is marked with an end to the provisional, exploratory quality of the twenties. There is an emphasis on the formation of a more stable life structure which incorporates new choices, and excludes aspects of the former life structure which are no longer valued. This process does not always occur smoothly, and the *Age Thirty Transition* can be a period of considerable emotional turmoil (Levinson et al., 1978).

The *Settling Down* period extends from the conclusion of the *Age Thirty Transition* to around the age of thirty-eight. This period of life is associated with an emphasis on the major areas of life, and is reflected in the consolidation of occupation, family, friendships and other central interests. The culmination of *Early Adulthood* occurs late in this period with the process of *Becoming One's Own Man*. This results from the realization of youthful dreams and aspirations, and the achievement of a greater level of independence. During the *Mid-Life Transition*, which is associated with the years from forty to forty-five, the era of *Early Adulthood* is terminated, and *Middle Adulthood* is initiated. This transitional process was identified as a critical period of male adult development, which consists of three tasks (Levinson et al., 1978). Firstly, a man reviews his life and examines his successes, failures and experiences with reference to the expression of his talents, abilities, attitudes and goals. Secondly, steps are taken towards the initiation of *Middle Adulthood* and tentative changes to the life structure are made in order to test new choices. Finally, a man at mid-life is confronted with the polarities of *Young/Old*, *Destruction/Creation*, *Masculine/Feminine*, and *Attachment/Separateness*.

As a result of the ages of the men who provided the empirical base for this theory of male adult development, few characteristics of the eras of *Middle Adulthood* and *Late Adulthood* were identified. However, Levinson and his associates argued that these eras are also composed of alternate structure-building and structure-changing periods.

Although the *Season's Of a Man's Life* has proved to be extremely influential in developmental psychology, the theory is not without its critics (Allen, 1978; Farrell and Rosenberg, 1981). Criticism of the theory is directed towards the assertion that development throughout the adult years can be conceptualized with a linear, sequential, series of stages based on chronological age. However, several other important contributions to the field of developmental psychology have independently described associations between psychosocial processes and different periods of life which are consonant with the theory proposed by Levinson and his associates (Gould, 1978). These associations are strongest in relation to the characteristics of life which are described in relation to the *mid-life transition*.

THE MID-LIFE TRANSITION

A great deal has been written about the middle years of life. However, different conceptualizations of the period have resulted in chronological boundaries ranging between thirty-one and sixty-five (Medinger and Varghese, 1981). Despite these differences, the related literature reflects a general consensus over the characteristics which are associated with the transition from *Early* to *Middle Adulthood*. This consensus, in part, appears to be due to the influential ideas of Jung, Erikson and Levinson and his associates. However, several other original contributions have been made to the field, and six primary characteristics of the mid-life transition can be identified. These include: increasing awareness of the passage of time and mortality; a concern with physical vulnerability; a reflection on the past; changes in various aspects of life; the experience of stress; and the modification of identity.

THE PASSAGE OF TIME AND MORTALITY

The advent of middle age has been associated with life being increasingly viewed as time until death, rather than time since birth (Neugarten, 1975). This conceptualization is further emphasized with the recognition of the cyclical nature of the life-cycle (Medinger and

Varghese, 1981). The middle-aged man is faced with issues related to both the younger and the older generation. Children are nearing maturity and are dealing with the issues of establishing their independence as young adults. In contrast, parents are aging and becoming increasingly dependent, physically weaker, and approaching death. These circumstances highlight the confrontation between lost aspects of youth, and an increasing awareness of the inevitability of death. Although middle age is associated with the acquisition of mature and independent adulthood, the achievement is tempered with paradox.

The paradox is that of entering the prime of life, the stage of fulfilment, but at the same time the prime and fulfilment are dated. Death lies beyond it is this fact of the entry upon the psychological scene of the reality and inevitability of one's own eventual personal death, that is the central and crucial feature of the mid-life phase — the feature which precipitates the critical nature of the period. Death — at the conscious level instead of being a general conception, or an event experienced in terms of the loss of someone else, becomes a personal matter, one's own death, one's own real and actual mortality.

(Jaques, 1965, p.506).

The sense of mortality and the wish for immortality was considered to be a central focus of the *Young/Old* polarity identified by Levinson and his associates in relation to the mid-life transition. Persistent, and increasingly frequent thoughts of death are associated with the deaths of parents, friends and contemporaries, and an increasing awareness of the physical signs of aging (Colarusso and Nemiroff, 1981).

A CONCERN WITH PHYSICAL VULNERABILITY

Apart from impairments due to illness or accident, a man at 40 has not fallen much below his maximal level of bodily functioning. The drop is often great enough, however, to give him a distinct sense of bodily decline at around this age. The visible 'cosmetic' changes, such as baldness, wrinkles and paunch, symbolize the loss of youth and the imminence of 'middle age', even though they involve little real decrease in bodily health and capacity.

(Levinson et al., 1978, p.22)

The salience to the middle-aged man of the physical changes which are associated with

the aging process are universally identified in research related to the mid-life transition. Although the most evident changes do not represent significant changes in aspects of physiological functioning, they are of great psychological significance as constant reminders of advancing age (Hultsch and Deutsch, 1981). Health problems, including heart attacks, ulcers, backache and other illnesses, increasingly undermine self-esteem, and the means of relating to the world (Farrell and Rosenberg, 1981).

A psychoanalytic perspective was adopted to argue that the concern expressed with bodily changes at mid-life is the manifestation of a normative conflict which exists between wishes to deny the aging process and the acceptance of the loss of a youthful body (Colarusso and Nemiroff, 1981). The authors argued that responses to the narcissistic injury involved in bodily changes during adulthood can take three forms. Firstly, attempts to *repair the body* include plastic surgery, dyeing hair, exercise and diet. Secondly, *finding a new body* can result through the establishment of heterosexual or homosexual relationships. Finally, adult toys and hobbies such as bigger and better boats, houses and cars can be used to *substitute for the body* and symbolically compensate for perceived physical inadequacies. The protective strategies which can be devised to maintain the body are implemented in response to the comparison between the present and the past (Neugarten, 1975).

REFLECTION ON THE PAST

The association between mid-life and reflection on the past was one aspect of individuation described by Jung. This idea was greatly expanded by Levinson and his associates, who argued that reappraising the past is one of the three major tasks faced by a man at mid-life (Levinson et al., 1978). The need to consider the past is the product of the increased salience of thoughts related to mortality, physical deterioration and the passage of time. The central focus in the assessment is the life structure which was consolidated during the *Settling Down* period of *Early Adulthood*, and its perceived relationship to the future.

The man at mid-life questions the central aspects of his life structure, and attempts to assess his accomplishments in life. These are centred on the central aspects of life. Typically, these include marriage, and the quality of the marital relationship is examined. In addition, children nearing maturity are of special significance as the man examines his role as a father in their past and present lives. Occupation is an extremely important aspect of the life structure, and the gratification with which it is associated, becomes the focus of close examination. In each of these areas, and other valued spheres of life, the middle-aged man attempts to identify his accomplishments, and the extent to which they reflect his values, talents and abilities. A crucial aspect of this process of evaluation is the relationship between the present life structure and the attainment of youthful goals and aspirations.

A realization of the extent to which life is based on illusions can be a common occurrence during the *Mid-Life Transition* (Levinson et al., 1978). One aspect of life where the role of illusion can be particularly apparent is that related to occupation, and an awareness of the 'shrinkage of possibilities' (Farrell and Rosenberg, 1981). The middle-aged man becomes far more accurate in his estimations of his chances of 'success' at work. For example, the corporate pyramid represents fewer opportunities for promotion, but competition from others becomes more intense. A lateral shift in occupation, rather than a promotion, may have profound psychological significance. However, the realization that parts of life are based on illusion may not always be associated with disappointment. The awareness can provide the freedom to aspire to new goals (Levinson et al., 1978).

CHANGES IN VARIOUS ASPECTS OF LIFE

Levinson and his associates believed that the modification of the life structure constituted the second major task of the mid-life transition (Levinson et al., 1978). The natural extension of the process of review is the commitment to new choices in various aspects of the life structure, or a recommitment to old choices within a new framework, in order to

develop a more fulfilling future.

It may be useful to conceptualize adult phases as periods when one attempts to create new existential anchors. Existential anchors are roles or commitments such as work, marriage and parenthood that literally anchor you to your present reality because they force you to cope with real tasks and people. Existential anchors have the inherent capacity to focus effort and provide feelings of growth as the nature of the tasks change. Anchors are central organizers in one's present time.

(Bardwick, 1978, p.137)

Levinson and his associates argued that changes to the life structure at mid-life may be of external or internal significance (Levinson et al., 1978). The *external* changes may be drastic, and clearly evident in the new life structure. These may involve divorce, remarriage, or major shifts in occupation or life style. They may also be evident in a marked decline in social or occupational functioning. Conversely, they may result in a notable increase in creativity or achievement. Other external changes may not be as evident. Although a man may remain in the same marriage, family and occupation, relationships may be qualitatively different. Children are approaching maturity and parents are approaching death, and these situations have important implications for social roles as father and son. Small increases or decreases in occupational responsibilities may be of great significance.

The man at mid-life also makes significant changes to the *internal* aspects of the life structure. These may include changes in social outlook, personal values, attitudes or beliefs. These changes are guided by an assessment of what can be given and taken in relation to both self and world. These modifications may or may not be evident in the resulting life structure. However, a lack of visible change does not preclude the possibility that the *meaning* of the life structure has changed significantly. The assessment of the past, and the resultant modifications to the life structure may progress relatively smoothly. However, they may also be associated with varying degrees of anxiety.

THE EXPERIENCE OF STRESS

The view that midlife is a period associated with transition was initiated by Erikson, who argued that a crisis provided the means through which the period of transition was experienced (Erikson, 1960). Mid-life has been described as a period just as turbulent as adolescence, although the psychological events of mid-life are used to promote a more fulfilling life (Gould, 1978). Similar arguments have been made by other researchers who have studied stress in adult development (Medinger and Varghese, 1981; Vaillant, 1977; Mayer, 1978). Levinson and his associates argued that for the majority of men, the *mid-life transition* is a period of moderate or severe crisis in which every aspect of life comes into question.

A profound reappraisal of this kind cannot be a cool, intellectual process. It must involve emotional turmoil, despair, the sense of not knowing where to turn or of being stagnant and unable to move at all. A man in this state often makes false starts. He tentatively tests a variety of new choices, not only out of confusion or impulsiveness but, equally, out of a need to explore, to see what is possible, to find out how it feels to engage in a particular love relationship, occupation or solitary pursuit. Every genuine reappraisal must be agonizing, because it challenges the illusions and vested interests on which the existing structure is based.

(Levinson et al., 1978, p.199).

In contrast to the view outlined above, a number of authors have argued that, rather than being a period of crisis, middle age is a *golden period* of development where men achieve a level of fulfilment not possible in younger adulthood (Farrell and Rosenberg, 1981). From this perspective, the period is characterized by security, diminishing external pressures, and the maturity and judgement to allow a man to enjoy life (Neugarten, 1975; Lowenthal et al., 1975).

The extent to which the *mid-life transition* can be regarded as a period of crisis appears to be dependent on the man. For some men, a conscious appraisal of the past may produce a great deal of anxiety, for others it may produce very little. The distinction may be based on the extent to which the period results in the modification of identity.

THE MODIFICATION OF IDENTITY

Jung argued that the self forms the centre of development, and is modified throughout life as a result of the process of individuation. Mid-life was considered to be a period which offers the potential for great psychological growth (Jung, 1933). Erikson also believed that mid-life was a pivotal stage of development, during which the emphasis shifts from a concern with achieving intimacy with another person to expression through *generativity*. A sense of distinctiveness, gained through a differentiated identity, were considered essential aspects of *generativity* (Erikson, 1950). In contrast to his predecessors, Levinson placed less emphasis on intrapsychic processes, and directed more attention to the relationship between self and world.

As a component of the life structure, every choice is saturated by both self and world. To choose something means to have a relationship with it. The relationship becomes a vehicle for living out certain aspects of the self and for engaging in certain modes of participation in the world.

(Levinson et al., 1978, p.44)

The self-concept and identity are inevitably affected by all the changes which occur throughout the *mid-life transition*. An increasing awareness of the passage of time, and other events, heighten the salience of thoughts of death — the most fundamental threat to the self. A concern with physical vulnerability places an emphasis on the bodily self, and its role in identity. A reflection on the past, and the resultant modifications to the life structure are dependent on the evaluation of all aspects of the self, and the way in which they are expressed in the world. The combination of these processes provides the basis of a restructuring of the self-concept which may be associated with a considerable amount of stress. In view of the identification of the major characteristics of the male at mid-life, attention can be directed towards the relationship between physical activity and male adult development.

PHYSICAL ACTIVITY AND MALE ADULT DEVELOPMENT

A review of the major theoretical contributions to the study of male adult development in general, and mid-life in particular, revealed very little information about the role of involvement in regular physical activity in this process. In fact, with the exception of several references to involvement in exercise as a response to an increasing awareness of bodily changes, physical activity is hardly mentioned in research related to male adult development. Levinson and his associates made several oblique references to physical activity in *The Seasons of a Man's Life* (Levinson et al., 1978). The most direct reference was made in relation to dealing with the issues of the *Mid-Life Transition*.

A unifying theme in the masculine pattern is a concern with *doing, making, having*. A man is supposed to get out there and do something: perform, accomplish, produce, bring home the bacon. If his body is a vehicle for demonstrating his masculinity, he tries to acquire special strength, endurance, sexual virility, athletic prowess. If his mind is the preferred vehicle, he uses thought as a weapon in the struggle to win, to outmuscle his rivals, be it in science, art or chess. Whatever the arena, he wants to establish his place in the world of work and of men. He wants to become a productive, independent, responsible, authoritative man who has the mental and bodily capacities needed to attain his goals.

(Levinson et al., 1978, p.233)

The quotation presented above, clearly identifies the traditional distinction between *body* and *mind*, and its perceived relevance to the lives of middle-aged men. However, the potential of this area of study appears to extend far beyond a distinction between *If his body is a vehicle* and *If his mind is the preferred vehicle* The identification of the importance of *mind-body* duality emphasizes the complexity associated with the process of male adult development which has been reviewed in this chapter. The theory of male adult development appears to provide an interesting perspective from which to study involvement in regular physical activity at mid-life. In particular, a number of specific areas of study can be identified in relation to the six characteristics of mid-life identified in the previous section of this chapter.

The first of these is associated with the increasing concern of middle-aged men with the

passage of time, and its resultant implications for a heightened sense of mortality. This process presumably results in the direction of attention towards physical aspects of self, and presents the following research question:

- To what extent does the increased awareness of the process of aging influence male involvement in physical activity at mid-life?

The second, and closely related area, is associated with the increased concern expressed by men at mid-life in relation to physical vulnerability. The research reviewed in this chapter indicated that middle-aged men are typically anxious about the cosmetic changes in appearance which accompany mid-life. In addition, it has been argued that concern with changes in shape and appearance, and with levels of physiological functioning, result in a wish to deny the aging process (Colarusso and Nemiroff, 1981). It has also been argued that the increasing incidence of health problems at mid-life undermines self-esteem (Farrell and Rosenberg, 1981). These findings prompt three research questions:

- To what extent do concerns with cosmetic changes and levels of physiological functioning influence involvement in exercise at mid-life?
- To what extent is involvement in physical activity used by men at mid-life as a means of expressing a denial of the aging process?
- If an increase in health problems at mid-life are believed to undermine self-esteem, to what extent does involvement in regular physical activity and fitness contribute positively to self-esteem?

A third characteristic which was considered to be central to the man at mid-life was the emphasis on a review of the past. This process is precipitated by the awareness of the passage of time and an increasing sense of mortality. Accomplishments, failure, talents and abilities are evaluated in an attempt to assess the way in which they are expressed in the life structure.

- To what extent does a review and awareness of experiences of the past influence involvement in regular exercise at mid-life?

A result of the review of the past is the attempt to modify the life structure in order to develop a more fulfilling and meaningful future. The modifications may be internal or external, subtle or dramatic. However, each results in either a commitment to a new choice in relation to one aspect of life, or a recommitment to existing choices within a new framework. It was also argued that a key element of transitional periods of life was the emphasis on the establishment of *existential anchors* with which to give life meaning (Bardwick, 1978). These arguments present three specific research questions for the study of involvement in exercise at mid-life:

- Can involvement in regular physical activity at mid-life constitute a *commitment to a new choice*?
- Do men who have been regularly involved in physical activity prior to mid-life make a *recommitment to an old choice within a new framework*? If so, how does it differ from their previous commitment?
- To what extent can regular involvement in physical activity provide an *existential anchor* for the man at mid-life?

The research which was reviewed in relation to the *Mid-Life Transition* indicated that different arguments have been advanced in relation to the extent to which the period may be regarded as stressful. However, a concern with the physical effects of the aging process, including noticeable changes in shape and appearance, has been identified as a common source of anxiety for middle-aged men.

- To what extent can involvement in regular physical activity be used by middle-aged men to cope with the stress associated with an increasing sense of physical decline?

The most central aspect of the *Mid-Life Transition* appears to be the self-concept. The sense of identity is implicated in each of psychosocial characteristics associated with men at mid-life: a concern with the aging process; a sense of increasing physical vulnerability; the review of the achievements and failures of the past; the modification of the life structure to

ensure a more fulfilling future; and the stress inherent in such a significant period of life. Each of these areas has important implications for the search for distinctiveness, and a sense of differentiated identity (Erikson, 1960).

- What is the relationship between identity and male involvement in physical activity at mid-life?
- To what extent are physical aspects of identity central to the identity of middle-aged men?

In order to address these research questions in this study, four primary areas of investigation were identified. The first, *involvement in regular physical activity*, was directed towards the examination of psychosocial influences on involvement in exercise. From this perspective, level and stability of involvement in regular exercise were examined. In addition, the relationship between the aging process and exercise involvement, the importance of involvement in exercise, and the important influences on reported levels of involvement in exercise were investigated.

The second major area of investigation was related to a number of aspects of *fitness*. These aspects included the definitions of fitness held by middle-aged men, the measured levels of various aspects of their fitness, and the self-assessed levels of physical fitness. The relationship between actual and self-perceived fitness has rarely been the subject of scientific study but was considered to be an important dimension of the relationship between involvement in regular physical activity and middle-age in men.

The third area which was identified for investigation was related to *identity*. The primary focus of this part of the study was the extent to which physical aspects of identity are central to the self-concept and identity as a whole. An essential part of this relationship which was identified for investigation was the salience of perceptions of body shape and appearance.

The fourth and final area which was developed for study focussed on the relationship

between involvement in physical activity and the extent to which it could contribute to the reduction of stress. Many studies have indicated that involvement in regular physical activity is associated with a reduction in stress (Morgan, 1980). However, there is little consensus reflected in the literature in relation to the mechanisms underlying such an association. Consequently, this study also attempted to provide an explanation for an association between involvement in regular physical activity, and the amelioration of stress in the lives of a group of middle-aged men.

In view of the framework provided by theory related to the process of male adult development, it was expected that a group of middle-aged men would reflect a concern with each of the issues associated with the *Mid-Life Transition*. In addition, it was anticipated that some middle-aged men would report an increased involvement in physical activity, and *physically active* men would reflect the increased significance of regular exercise in their lives with: an increased level of involvement in regular exercise; an emphasis on physiological functioning and performance; a centrality of involvement in physical activity to identity; a concern with the changing shape and appearance of the body; and ways in which physical activity could be used for stress reduction. It was expected that the substantiation of these circumstances would lead to the ability to identify a theoretical perspective with which male involvement in physical activity, at mid-life, could be considered.

CONCLUSION

The primary objective of this chapter was to examine the process of male adult development in order to provide the context in which to investigate the relationship between the advent of middle-age in men and involvement in physical activity. The ideas of three influential psychoanalysts, *Freud*, *Jung* and *Erikson*, in relation to development, were reviewed before the theory of male adult development proposed by *Levinson* and his associates was considered in some detail. This was followed by a discussion of the primary characteristics of the *Male*

Mid-Life Transition, which result in the distinction between the man at mid-life, and men at other stages of the life-course. Six major themes in the literature were identified: an awareness of the passage of time, and a resulting heightened sense of mortality; a concern with a decline in physical aspects of identity; the review of past achievements and failures, and an evaluation of the expression of talents and abilities; the modification of the life structure in order to produce a more fulfilling future; the association between each of these processes and stress; and finally, the centrality of self-concept and identity to this period of life.

Involvement in physical activity has rarely been considered in relation to male adult development — by either researchers studying development, or those studying involvement in physical activity. However, the theory of male adult development appeared to provide a valuable perspective from which to study male involvement in exercise at mid-life. Consequently, a number of specific research problems were established, and four major areas of investigation were identified. These included *involvement in regular physical activity, fitness, identity, and stress*. The next chapter will consider, in detail, the involvement in physical activity reported by the men who participated in this study.

Chapter III

PATTERNS OF EXERCISE INVOLVEMENT:FOUR DIFFERENT GROUPS

INTRODUCTION

The consideration of the relationship between the advent of middle-age in men and involvement in regular physical activity can best begin with an examination of levels of involvement in exercise reported by a group of men at mid-life. Consequently, this Chapter will focus on four separate groups of men who were identified in relation to differing patterns of involvement in regular exercise.

The first of the four groups contained eleven men who had been involved in regular physical activity for at least five years. In all but three cases, these men had led active lives since early childhood. In view of their consistency of involvement in exercise over a long period of time, these men will be known, throughout the remainder of this dissertation as the *Perennials*. In contrast, the second group of men consisted of nine men for whom physical activity had assumed far greater importance in their lives within the five year period prior to the interview. The *Adopters* were categorized in view of their relatively recent adoption of an active lifestyle after many years of inactivity, and the enthusiasm with which their involvement in exercise was pursued. The third group to be identified consisted of eleven men who had shown a low level of involvement in activity for at least five years prior to the interview. Eight of these *Rejectors* reported leading sedentary lives since their youth. Finally, a fourth group of seven men had decreased their involvement in exercise significantly within the five year period prior to the interview. Each of the *Relegators* had previously been engaged in high levels of physical activity.

Although classifications of the men were made based on the criteria outlined above, there were difficulties assigning one or two men to each group. This resulted from differences between individuals being apparent despite obvious similarities. For example, one man was

classified as a *Perennial* based on his report that he jogged for two kilometres twice a week, walked five kilometres four evenings a week throughout the year, and occasionally swam in summer and cross-country skied in winter. This pattern had remained stable for many years. Although his level of activity did not reflect the demands of long-distance running reported by three other *Perennials* this man's involvement in exercise reflected a similar, stable commitment to regular physical activity. In contrast, a man who played hockey once a week during the hockey season and canoed four or five weekends during summer was regarded as a *Rejector*. Although more active than those who did not report any involvement in physical activity, his limited and sporadic involvement in exercise did not warrant his classification as a *Perennial*. These examples serve to illustrate the difficulty in making classifications of this kind. Although they provided a useful framework with which to examine involvement in physical activity, they were not regarded as groups with clearly defined boundaries. As illustrated above, argument could be made to include a small number of the men in other groups. However, in each case, the similarities appeared to outweigh the dissimilarities.

The aim of this chapter is to examine, in some detail, the context in which these men faced the option to exercise. Each of the groups outlined above, in relation to characteristics of those men who composed it, will be discussed separately. The discussion of each group will be preceded by the presentation of a profile of one man in each group. Eight men, two from each of the four groups, were asked to provide an accurate description of the events of a designated 'typical' day (see Appendix 4: *Correspondence*). Each of the men was selected in view of the extent to which they could be regarded to be representative of their group. Four of the profiles were selected for presentation. Each was edited. However, neither the words used by each man, nor the substantive content of each report, was changed. The discussion of the characteristics of each group is related to four major considerations. Firstly, the level of involvement in exercise will be reviewed. This will be followed by an examination of the influence of age on the different levels of involvement observed. Thirdly, the importance attributed to involvement in exercise will be considered. Finally, the effects of other aspects of life facilitating or inhibiting

participation in regular physical activity, for each group, will be examined. Although these four areas overlap a great deal, they offer a useful framework in which to consider various levels of involvement in physical activity.

PROFILE: DAVID BURNS, PERENNIAL

It is a very important part of my life in relation to the fact that it takes up part of every day. I enjoy the ritual of going to the locker room — it helps structure my day.

David Burns left England to study in the United States, and moved to Canada nine years later. An appraisal of his small but well organized office revealed a wide range of interests within his field. A newly acquired personal computer occupied a prominent place on his large desk. Well-groomed and fashionably dressed, David's genial demeanour accurately reflected a very personable man. Although confident of the reputation he had established as a teacher, David felt that he was still building a research career and believed that he would not reach his academic peak for several more years. Tall and athletic, David had been a runner in track and field since his school days, and at the time of his interview ran up to ten kilometres five or six times every week. That level of involvement accompanied an interest in many sports, both as a spectator and as a participant. After becoming divorced from his wife four years before the interview, David believed that he was very much a single person. Despite describing himself as gregarious, David felt that he greatly enjoyed his independence.

06:30 Awoke and listened to the radio for news, weather and sports. Always slightly depressed and anxious in the early morning (not typical of my normal disposition).

07:10 Got up with little energy and went through typical ablutions. I have no radio, television or music on after the seven o'clock news. No breakfast (typical of a school day), nor coffee or tea at home. Had a 1000 mg Vitamin C tablet, and a glass of water. Did five minutes of back, leg and shoulder stretching to wake me up and reduce my feelings of drowsiness. Dressed semi-casually.

- 07:45 Collected my papers together which I had been grading the previous day and tabulated some scores. Tidied up a few things, and put on the dishwasher.
- 08:00 Left my apartment and walked to the university (six blocks). I always feel much better for this short walk, irrespective of the weather. Positive thoughts and attitude this morning.
- 08:15 Went straight to my office. I am usually one of the first into my department in the morning. Sat and worked on correspondence and tabulating grades for an hour, with little on my mind but what I was doing.
- 09:15 Went to the cafeteria for a coffee — with sugar. I had one cup and spoke about the football final with a student/friend.
- 09:45 Completed some examination questions for some final exams and readied the exams for typing. Spoke with two students in my class about their performance in a recent exam.
- 11:00 A colleague came by my office to talk about a spring course that I am coordinating. Went with him for a cup of coffee (one sugar).
- 12:30 Taught a one and a half hour introductory course to seventy-five students from the university hospital. The class went quite well, and I felt energetic. The class bothers me sometimes because they are so non-academic and have no thirst for knowledge. It's rather like teaching a high school group. I was more than ready to finish and get out.
- 14:00 Went to my office. Two students were waiting to see me and I spent fifteen minutes with them. No lunch — I often go without breakfast and lunch — particularly on a teaching day. The nervous energy required for teaching seems to close off my eating and my hunger drives.
- 14:15 Worked on my computer for an hour, making teaching materials. I find it very relaxing and absorbing. With no interruptions, I am in a world of my own.
- 15:00 I don't particularly feel like a workout, but I've decided to go for a run outside.

I run on my own most of the time. I suppose it's mainly because of a lack of people around the department who are also interested in doing it. There's also the problem of trying to coordinate times with other people. I very rarely run in the morning. I run in the afternoon, but range between about one o'clock and four or five o'clock so it would be fairly difficult to arrange a specific time. I don't like running when everyone else is running. I'm the sort of person who likes to do things when everybody else is doing something else.

- 16:30 Finished a ten kilometre run in the river valley with a workout in the weight room, a stretch and a sauna. I always run on my own and enjoy it that way. It also stops me getting into a competitive frame of mind. Exercise felt really good today, even though I didn't feel like it to begin with. My body responded well and I was still full of energy at the end. Walked back to my office.
- 17:30 Walked home. Bought a newspaper and sat at home with a glass of orange juice, reading the paper.
- 18:00 Watched the news on the television for half an hour while I was making dinner for myself. Spoke with a friend on the phone for a while. I'm somewhat health conscious with food but not passionately. Baked chicken, salad and orange juice followed by an apple and a chocolate bar.
- 19:15 Prepared a class for tomorrow (three hour graduate lecture). Had the stereo on while I was working, interspersed with the 'Monday Night Football'. As usual, I tended to nibble on food throughout the evening — mainly fruit, crackers and things like that.
- 21:00 Changed and went for a sauna and a hot tub. Spoke with a friend from another apartment and then returned to my apartment. I felt totally wiped out by the heat.
- 22:00 Watched television. There's a new channel which I watch almost to the exclusion of all others — it's called 'Arts and Entertainment' and shows good British drama most of the time. Called my girlfriend and chatted for a few minutes. Made myself a cup of tea.
- 23:15 Went to bed. I was tired, but I read every night. Fifteen minutes was all I could manage.

THE PERENNIALS — I'VE BEEN ACTIVE ALL MY LIFE

I remember playing hockey when I was four, five years old. I always have. I've made other sacrifices but activity has always survived. I've been active all my life — the same way as I'm hungry and I'll eat.

INVOLVEMENT IN PHYSICAL ACTIVITY

The eleven men who could be regarded as *Perennials* reflected a stability of involvement in exercise which was not evident in the lives of the men who composed the other three groups. Seven of the *Perennials* made explicit references to being involved in a broad range of physical activities as children. Although the manifestations of their involvement in exercise had changed as they moved through adolescence and adulthood, the importance which they attached to regular physical activity had remained constant throughout their lives. The four remaining *Perennials* had become involved in different forms of exercise after varying periods of inactivity following their involvement in organized high school sport. Of these four men, three reported patterns of involvement which had remained stable for between eight and ten years. The remaining man had been leading an active lifestyle for the previous twelve years.

The *Perennials* were involved in a wide range of activities. The group included three men who ran between 80 and 100 kilometres each week, to the exclusion of involvement in other activities. The remainder of the men were involved in activities including fitness classes, swimming, racquetball, squash, tennis, badminton, soccer, hockey, softball, cross-country and downhill skiing, skating, golf and weight training. The levels of involvement reported ranged from a minimum of five hours a week to a maximum of twelve hours a week. The average involvement was approximately eight hours a week. In addition, eight of the men specifically mentioned including other forms of physical activity in their lives whenever possible. For example, several men mentioned using stairs rather than elevators, and walking short distances rather than using a car or public transport. Six of the men reported that their level of involvement in physical activity increased when they were on holiday and three *Perennials* mentioned taking holidays based on involvement in exercise. Two men often organized 'ski holidays' and one man frequently travelled out of the province, and sometimes out of the country, in order to compete in marathons and other competitive races. For each of the *Perennials* at middle-age, involvement in physical activity was a central component of life

(Levinson et al., 1978).

As a central component of life, involvement in physical activity could be seen to affect other aspects of life over time, and exert a general influence on the course of everyday life. The profile of David Burns, presented earlier in this chapter, clearly illustrated this situation. It was evident that David's eating patterns reflected a concern about a limited caloric intake, and the composition of his diet. David's breakfast consisted of a vitamin supplement, and he did not eat anything until evening. David's major physical activity for the day, a ten kilometre run, occurred during the afternoon. However, other activities occurring during the day, such as the early morning stretch, and the walk to and from the university, also reflected the importance with which David viewed an active lifestyle. For David, and each of the remaining *Perennials*, the commitment to an active lifestyle had remained constant despite the advance of middle-age.

AGE AND INVOLVEMENT IN PHYSICAL ACTIVITY

The relationship between the aging process and involvement in physical activity for the *Perennials* appeared to have three distinct characteristics. These characteristics were clearly illustrated by three different men, although they were illustrative of other comments which were made.

Firstly, each of the *Perennials* made comments in reference to their awareness of the aging process. In general, these comments were related to general physical, occupational and social indicators of age. One of the *Perennials* expressed his increasing awareness of his advancing age purely as the realization that he was becoming older. This awareness appeared to be, at least to some extent, disquieting, and reflected the literature reviewed in Chapter II in relation to male adult development.

One of the things that makes me realize that I am getting older is seeing friends around me also aging. I'm starting to realize that I've passed my peak. It has only been recently that I've had feelings about it that aren't positive. I never really felt that I would ever feel old; that it would affect me; that I would

worry about my age, but now I'm beginning to think maybe I am.

Secondly, although the *Perennials* reflected some concern with their advancing age, they appeared to accept the process philosophically in relation to their involvement in physical activity. In absolute terms, each of the men, relative to the past, had decreased his involvement in exercise. In addition, five men stated that they believed their level of involvement in exercise would decrease in the future. However, it was evident that for each of the men the importance of involvement in exercise, and its significance in his life, was not subject to the same degree of change.

Sport has always been a very important activity to me. As I've grown older, I have had more of a tendency to become involved as a spectator rather than as a participant. I also try to cultivate sports that one can use for a lifetime. I curl regularly and play golf in summer. My theory about both curling and golf is that they're good sports because I'll be playing them when I'm eighty.

Finally, it seemed that involvement in exercise was so much a part of the lives of these men that it would continue despite the effects of increasing age. Although the process of male adult development produced changes in a number of different areas of the lives of these men, it appeared that involvement in exercise was a constant and impervious to change. The most graphic example of this process came from a man for whom involvement in exercise had perhaps been the top priority throughout his life. Although the experience described below is not typical of that encountered by the other members of the group, it clearly illustrates the devotion with which involvement in exercise can be pursued. In the life of this man, involvement in physical activity had occurred unabated throughout life, unaffected by pressures associated the usual course of psychosocial development.

I don't know where ten years of my life went in terms of shape and fitness and stuff like that. I just always kept playing sports and doing things; weekends or evenings. Other people may not have been working any harder than me, but they'd be having kids and responsibilities and stuff like that and they've had to give up more and more of their outside activities. I just kept doing the things that I have always been able to do.

IMPORTANCE OF INVOLVEMENT IN PHYSICAL ACTIVITY

The reasons why the *Perennials* valued involvement in physical activity so highly, and why David Burns would run ten kilometres when he 'didn't feel like it to begin with' were simple, yet paradoxical. Although lengthy discussion revealed the extent to which involvement in regular exercise was entrenched in the lives of these men, the reasons offered by way of explanation for these levels of involvement were predominantly related to psychological well-being, and the quality of life. One *Perennial* clearly articulated a perceived link between his involvement in physical activity and his awareness of a sense of general well-being throughout his life,

My athletics are very important. Ever since I was a kid athletics have been a central, *central* part of my life. Any period of my life where I've ever stopped participating or stopped doing it has been a real downer.

Four of the *Perennials* renewed their involvement in exercise, after a period of inactivity, in view of perceived potential physiological benefits of a more active lifestyle. At the time of the interview, each man believed that this initial source of motivation was of minimal significance to his continued involvement in regular exercise. Once again, the emphasis appeared to have shifted to less tangible benefits.

The exercise and physical fitness have taken on a value of their own. That value is a general sense of feeling good.

It was evident that the *Perennials*, as a group, believed that their involvement in exercise was indispensable as a contributor to the quality of life.

I think that I take part in activities because I find it a very enjoyable way to spend time. I feel that my life would be a tremendous amount poorer if it weren't for sports activities.

Although similar sentiments were expressed by each of the men, the specific effects of involvement in exercise appeared to be more obscure and the mechanisms through which these

effects were achieved seemed to be even more mysterious.

I don't know what joy there is in skating and shooting a puck, any more than having a paper accepted for publication or running an experiment that works.

In many ways, the *Perennials* appeared to be relatively unassuming in relation to their level of involvement in physical activity. Reflecting the way in which regular exercise was entrenched in their lives, the *Perennials* appeared to take their involvement in activity for granted, and did not reflect the 'high profile' approach which might be expected from such a group. For each of these men, involvement in physical activity was a part of their everyday routine. Involvement in exercise was not viewed as something to be considered and evaluated every day. As a central component of the life structure, its inclusion in daily life was automatic.

Running is very important, it's part of my daily routine. It is an influence on what I eat, how much rest I get — I guess it's pretty much a lifestyle kind of thing. It has a pervasive effect on my life.

Several of the *Perennials* reported an awareness of the pressure exerted on their habitual involvement in exercise when their routine was disturbed by other demands. Although minor changes could be accommodated by a reorganization of daily activities, frequent travel affected the *Perennials* in different ways. Three of the men reported difficulties in arranging the use of facilities such as squash courts and swimming pools while travelling, and were glad to return to their familiar environments. The remainder of the group members ensured that their involvement in exercise was unaffected by the change in surroundings.

When I go on trips I tend to just go on running. People think you're a little strange, but I always take my running gear with me.

INFLUENCES ON INVOLVEMENT IN PHYSICAL ACTIVITY

The *Perennials* were situated within a physical, familial and social environment which provided a steady basis of support for their involvement in physical activity. The contribution

made by each of these environments was the result of a number of different factors.

With the exception of two men, identified in Chapter I, each of the *Perennials* held tenure at the university and was involved in work related to both teaching and research. However, work did not appear to be the only life pursuit which was of central importance to the *Perennials*. In view of the time associated with occupational pursuits work was a central life component for each of the men. However, the members of the group appeared to attach varying levels of significance to its role in life.

If work was my central life interest I would probably be depressed. Sports and physical activity have always been a nice complement. When things are miserable at work you can always go and play a game of racquets or you can go and run, and that is very important to me. I'm not a person who lives for work — I go to work so I can live.

Each of the men mentioned the sedentary nature of their work and emphasized their determination to maintain an active lifestyle. The large amount of autonomy associated with their occupation was believed to be one of the major factors facilitating regular involvement in exercise. The *Perennials* also believed that the availability of the extensive sporting facilities, outlined in detail in Chapter I, was also an important factor in an active lifestyle. One *Perennial* believed that one of the most attractive things about his place within the university was the opportunity that it gave him to lead an active life.

A lot of the things at university are full of crap but one of the things that makes university so attractive is that it's so easy to keep fit. You can build the facilities right into your routine. You've got no excuse not to do things.

The relatively high level of discretionary income associated with a position as a university professor was also considered by the *Perennials* to be an important influence on their regular involvement in exercise. Ironically, the use of perhaps the most extensive sporting facilities in the city required very little of their income. Eight of the *Perennials* believed that their level of income made it relatively easy to purchase a variety of sporting equipment ranging from running shoes to downhill skis. Three of the men also believed that their ability to buy homes

close to the university made regular involvement in exercise easier to include in their daily lives.

Four of the *Perennials* were divorced, and the remaining seven men were married. Each of the married men believed that his wife and family supported his involvement in activity. Many studies which have examined adherence to structured programmes of regular physical activity have showed the importance of such support in maintaining exercise adherence (Andrew, Oldridge, Parker, Cunningham, Rechnitzer, Jones, Buck, Kavanagh, Shephard and Sutton, 1981; Andrew and Parker, 1979). Despite the support reportedly given by the wives of the married men, only three of these men believed that their wives also led active lives. This did not appear to cause any conflict and two of the men pointed out the irony of large differences between their wives and themselves in relation to involvement in exercise. One *Perennial* believed that both his wife and his children supported his involvement in exercise. However, even their generous level of support appeared to be extended to the limit.

Don't tell my wife, but I'm sure that if I wasn't married and didn't have a family I'd be out curling all weekend and things like that all winter long. If I'm soul baring a bit here, I think that's true. I tell my wife regularly that I have to go curling at the weekend and I have her convinced, at least to some extent, that it is true.

One of the three *Perennials* who was not married appeared to value involvement in exercise beyond all other aspects of his life. The separation and resulting divorce from his wife was obviously the result of a constellation of factors. However, one comment he made reflected the high priority which he accorded to involvement in physical activity and suggested that this may have been a source of some conflict in his former marriage.

It's easy to steal an hour out of the day for exercise — much easier than it is to spend the same amount of time with your wife, for example.

At the time of the interview, the same man reported that a two year relationship with another woman was also unsteady. His high level of involvement in exercise, and several other characteristics considered 'immature' by his partner, appeared to be causing problems within

the relationship.

Have you ever heard of the Peter Pan Syndrome? My girlfriend just gave me a book on it. She said, "Read this. You'll probably see some things in there that you recognize."

It was evident that, as a group, the *Perennials* received at least tolerance and, in the majority of cases, support from their wives and families for their involvement in exercise. However, an extremely active lifestyle appeared to create some problems in the relationships experienced by the man quoted above. Overall, the comments made by the *Perennials* suggested that their involvement in physical activity would continue with or without support from their wives and families.

There has been little research conducted in relation to the importance of other forms of social support on long-term involvement in physical activity. However, the influence of peers is commonly cited as a factor in maintaining adherence to an exercise programme, and 'drop-outs' often report a need for group support (Andrew et al., 1981). The social aspects of physical activity were mentioned by each of the *Perennials*. Seven of them regularly exercised with a group or were involved in team sports. One *Perennial* discussed his avoidance of sports like running, because he found the activity tedious and unenjoyable. In contrast, he greatly enjoyed playing basketball with a group of acquaintances three times a week. The group consisted of various faculty and graduate students who had been playing together informally for fifteen years. Enjoyment of the social interaction was foremost in his involvement in activity. Another *Perennial*, who led an extremely active life, believed that social interaction, and the opportunity to mix with others with similar interests, was a primary motivator in his involvement in sport.

I don't look at activity ... what's the word ... I'm not the sort of guy who has to run or wants to go and run every lunch hour just because, "Hey, it feels better". I don't get that sort of stimulus out of exercise. I go for more the social camaraderie of team sports like hockey. Just to better get to know the people who are involved.

The remaining three *Perennials* were involved in running, swimming, or activities which did not necessarily involve others. Their preference for exercising alone was based on the same attitudes as those expressed by David Burns earlier in this chapter. Difficulties associated with finding men with similar interests, abilities and schedules resulted in these men choosing to exercise alone.

SUMMARY

The *Perennials* were a group for whom involvement in physical activity was a central component of life. For the majority of these men, this had been the case throughout life. Although aware of the advance of middle-age, the *Perennials* appeared to accept the process philosophically. The manifestation of their involvement in physical activity was changing, but the importance attached to exercise, and its significance in their lives, appeared to remain constant. Although there were many different reasons given for their continued involvement in exercise, the *Perennials* placed a great deal of emphasis on the sense of well-being obtained from physical activity, and its contribution to their quality of life. An autonomous, well-paid job, an established routine, and the support of family and friends all contributed to an environment which was extremely conducive to a long-term commitment to an active lifestyle.

PROFILE: PETER THOMPSON, ADOPTER

The point comes where men say "Look, I'm not over the hill — I still want to be active, I still want to be thought of as young — I still want to be thought of as someone who women find attractive". I think that is important to a lot of men who are my age.

Peter Thompson was a quiet, shy department chairman who took great pride in efficient administration. The briefest of conversations revealed his keen sense of humour and

the value he placed on good relationships with fellow staff and others with whom he worked. At the age of 42, he was married without children — a decision made which neither he, nor his wife, regretted. The lack of familial ties allowed both him and his wife the freedom to live independent lives, a factor which Peter believed was instrumental in their two-year separation which began four years before the interview. After being active throughout his university years, Peter did little or no exercise for just over ten years. At the age of thirty-seven, Peter stopped smoking and began some 'gentle running', an activity that had become 'entrenched' in his life, paling into insignificance beside his love for windsurfing and snow-skiing.

07:15 Up. Alarm should have gone at 6:30! Shower, shave, coffee, panic.

07:40 Left home. Got stuck in a vast traffic jam on the bridge.

08:20 Arrived (late) for dental appointment.

09:30 Escaped from the dentist with half my face frozen. Decided to have breakfast at the Plaza. Bacon, an egg, one slice of toast, two cups of coffee. Shared my table with a rather attractive nurse. Unfortunately, couldn't talk without a fine spray of saliva flying out of the right hand side of my mouth which was still frozen. She didn't seem impressed!

10:00 Arrived on campus. Checked to see what time the indoor track is open for running (5:00-5:30 pm).

10:10 Arrived in the department. Cathy wanted to talk about a change in teaching responsibilities. Karen wanted to discuss the weekend results. Susan was panicking about our abstract which is due in New York on Thursday. Wrote Karen's abstract for the Salt Lake meeting. Tried to get a cup of coffee, but there was none left. One of my plants (which I forgot to water) seems to have died over the weekend.

11:00 Discussed the progress of the Research Group with Gary who had just returned from a meeting in Seattle. It looks favourable for the group to go ahead with their plans. Mailed abstract to New York. The Government has some financial 'help' which the department may be able to use. Wrote reference letters for two graduate students.

12:00 My office clock reads 3:00 — must get it fixed. Staff meeting. Nothing particularly controversial, we admitted a student to the graduate programme and had reports on 'problem' students, all of whom seem to be doing better.

- 13:00 Lunch. Walked over to the Students' Union Building (via the parkade, where I'd left my money in the car). Also had two pain killers since the local anaesthetic had worn off my teeth. The dentist told me one tooth might be "a little sensitive" for a couple of days — not serious. Lunch: one bowl of chicken noodle soup; one 'small' tomato and cucumber salad; 300 ml of unsweetened grapefruit juice. About what I usually eat, although sometimes I have a salmon or egg sandwich rather than the salad. Was tempted to eat more, but decided that if I was still hungry I'd have more after I'd eaten the salad. The 'small salad' was actually huge, and I wasn't hungry. The salad also had huge amounts of chopped onion, which should help me to get rid of people from my office this afternoon.
- 13:30 Back in office. Returned messages and made a phone call. Went through the mail. Wrote a brief note to a prospective employee, wrote up the staff meeting 'minutes' and wrote a letter to a government official.
- 14:45 Cup of tea at my desk. Interview with another prospective employee, organized material for a workshop tomorrow. I'll have to read over it tonight — but a lot of it is not really relevant. More letters. My plant seems to have recovered.
- 16:00 Research conference with technician. Results from last weekend are contrary to everything we expected and although there is an explanation for what we observed, it means that lots of our other data becomes even more mysterious.
- 16:25 More paperwork. Conversation with my administrator about various things.
- 16:55 Walked over and changed. Because I was rushed in the morning I didn't get my lightweight gear packed. Just grabbed shorts, socks and a t-shirt. The shorts proved to have a non-working zipper (fortunately I had a *long* t-shirt) While putting on my socks the heel tore, but I decided to run anyway.
- 17:10 Stretch, then ran three miles — 24 laps on the indoor track.

Mostly I think about my performance when I'm running ... I time each lap ... I have a stopwatch on this wristwatch ... and my objective right now is to run three successive 6:40 miles. It's nice to have something that you can't quite achieve and then sort of reset it down once you've achieved it. For a long time it was 21 minutes — three seven minute miles — and I couldn't achieve that this summer. Now it's easy. Even when I run badly it's still under seven minutes. I don't know what the satisfaction is in all that — but there is a certain amount of satisfaction.

- 17:30 20:21 — about 16 seconds slower than my personal best, but okay. Walk two laps, jog

a lap, stretch. Shower, change. Of course I have a blister on my heel, but it isn't serious.

18:20 Arrived home. Coffee and a sandwich. One slice of bread, butter, devilled ham. Sat, read the paper then did a crossword puzzle. Chatted to Lisa about nothing special.

20:20 Changed. Drove to a restaurant for dinner. Lisa had never been there. I had smoked salmon; then ordered chicken wellington which was awful and so I sent it back. Ordered a small steak instead. Also drank half a bottle of disgusting Portugese rose. Coffee afterwards. Sat and talked about Lisa's activities until eleven thirty. Drove home, went straight to bed and fell asleep almost instantly.

THE ADOPTERS — WHY DIDN'T I DO IT WHEN I WAS THIRTY?

I'd had information about things like heart attacks, heart disease, personal history — all that sort of thing. Certainly social factors have influenced me. Maybe just wanting to be, in my own small way, you know, not a fat middle-aged slob. The constellation of factors that are me maybe. I wonder. I honestly ask myself how much of this is me, my own, and how much is due to other factors. It's certainly a source of pride for me. In the absence of things like being thirty-eight and having a fear of death, why have I really done it? Why didn't I do it when I was thirty? I was not Mr. Wonderful at thirty. Who knows? I can't figure it out.

INVOLVEMENT IN PHYSICAL ACTIVITY

The nine *Adopters* identified within the sample, like the *Perennials*, all reported high levels of involvement in regular exercise. However, unlike the *Perennials*, and the other groups identified in this study, the *Adopters* had all adopted an active lifestyle within the five year period prior to the interview. All of the *Adopters* described being involved in physical activities as boys. This was predominantly the result of organised sport within their schools. However, their levels of participation in exercise peaked during young adulthood, and all of the men had ceased to be involved in physical activity before leaving university. With the exception of some sporadic involvement in sporting activities, the *Adopters* had all led inactive lives before reaching their late thirties. At the time of their interviews, their involvement in physical activity

ranged from running 100 kilometres a week, to being involved in karate for four hours a week. The *Adopters*, like the *Perennials*, were involved in a wide range of activities which included running, hiking, cycling, karate, cross-country and downhill skiing, golf, hockey, tennis, swimming, windsurfing, racquetball and squash.

Although the *Perennials* appeared to have little difficulty including a period of exercise in their daily lives, the *Adopters* seemed to be more conscious of the effort associated with such a commitment. In order to maintain their involvement in activity, each of these men had to modify his routine. In some cases, this meant changing work activities in order to include involvement. In others, it meant consciously manipulating other aspects of their lives.

This may sound kind of strange but if an activity doesn't fit into your life, you've got to fit your life into the activity. So, for example, I have to mould my teaching schedule around 'old-timers' hockey.

Involvement in exercise was important enough for another *Adopter* to reorder his work priorities or ensure that he had some time to himself during the weekend.

Exercise occupies five or six hours of my week. It is important in the sense that if I don't get it then I feel something is missing, and I will make sacrifices in order to get some exercise. For instance, I will avoid some work responsibilities in order to get out at lunch time. Or I'll make sure I take some time on the weekend away from the family.

The patterns of involvement in physical activity reported by national surveys were identified in Chapter I. Concern with low adherence rates and the high frequency of attrition in the early part of an exercise programme, despite reports of highly positive attitudes towards involvement, has been commonly reported. The experience and observations of one of the *Adopters* provided a quite different perspective on this situation, and clearly illustrated the differences between the routine of an *Adopter* and that of a *Perennial*.

Physical fitness is important, but with the reservation that it tends to get thrust aside. The tendency I've had, and that I've had to deal with, is that you start off on a fitness programme of some kind — often self-imposed. I've seen this happen constantly because I run regularly. I see people over there, my friends,

and they go and they say "I've had it. I'm getting old. I'm getting unfit and I'm really going to work at it." So they work for two weeks or three weeks. Usually, because they're doing it too hard for their level of training, they get a minor injury and they never come back. Similarly, a holiday will break the pattern and instead of coming back and starting again it's gone. The month that they worked, or two months, or even a year, disappears. The most important thing to realize in this situation is that there will be times when your activity pattern will be interrupted. It's not a big moral issue. You have to just go back and do it.

AGE AND INVOLVEMENT IN PHYSICAL ACTIVITY

Each of the *Adopters* had recently begun to include involvement in exercise as a regular and important part of his daily life. However, the origins of the increased importance of involvement in exercise, for each of the men, seemed obscure. It was relatively easy for each man to identify the circumstances and environment in which activity began. However, it appeared to be far more difficult to identify when the changes in attitude towards activity were first apparent. Several comments made by the men suggested that an increasing awareness of age was an important influence. However, it appeared that an awareness of the aging process, and particularly its commonly assumed deleterious effects on health, developed insidiously.

I seem to be doing more — I think it's a function of age. As you get older, and I think this is probably true for people over forty, you tend to think more about health and longevity. I certainly have in the last ten years — I don't know precisely when I started thinking about it.

For each of the *Adopters* it appeared that renewed involvement in physical activity was coincidental with a number of changes in the prevailing life structure. It has been argued that obvious changes to the life structure of a middle-aged man may include a different attitude towards work, a change in a long-term relationship, or a modification in lifestyle (Levinson et al., 1978). The *Adopters*, as a group, reflected a number of these changes in their lifestyles. Although each of the *Adopters* believed that he had not yet reached the peak of his academic career, involvement in physical activity appeared to provide a new challenge and provide a different sphere in which to attain achievement. Consequently, involvement in regular exercise,

in this case running, assumed characteristics previously associated with work.

There was a time when I thought that running was a new challenge; that I had mastered most of the domains that I had set out to master. You know, professional domains, interpersonal domains and not through boredom, but through some sort of satiation. Part of the reason that I enjoy running so much was that it was a deeply satisfying challenge that looked like it would go on for a long time.

The profile of Peter Thompson, an *Adopter* described earlier in this chapter, clearly reflected a man stimulated by the challenge of achievement in running. Although an extremely diligent Department Chairman, Peter made time in his daily schedule to run. His description of his running, and his attempts to achieve better performance reflected the extent to which he was absorbed in the challenge.

Changes in personal relationships are commonly associated with men at middle-age (Hepworth and Featherstone, 1982). Of the nine *Adopters*, eight were married. One of these men, Peter Thompson, had reconciled his differences with his wife after a separation lasting two years. The remaining *Adopter* was single at the time of the interview, after a long-term relationship had ended four years earlier. In each of these latter two cases, it appeared that being forty years of age, and single, had been an important influence on their involvement in exercise. These men had initiated their involvement in physical activity around the time that difficulties in their relationships produced emotional upheaval in their lives. After years of stability, major decisions in important areas of life had produced a significantly different life structure in which physical activity had been assigned an important part.

I've been more concerned about exercise in the last little while. For six, seven, eight years I wasn't very concerned at all but this last year and a half, or so, I've started to work out hard pretty regularly. I had some major lifestyle changes in a number of areas. A relationship changed, my style of living changed. I split up with a lady about four years ago and went through a little — kind of — down period. When I came out, or as I came out, of that I tended to start working out a lot more.

IMPORTANCE OF INVOLVEMENT IN PHYSICAL ACTIVITY

The *Adopters* were involved in physical activity for different reasons. Although the *Perennials*, as a group, emphasized the feelings of well-being which they derived from physical activity, only one of the *Adopters* believed that the enjoyment of the exercise was a primary motivator for his involvement. After recounting his participation in sport as a child he enthusiastically described the similar feelings of enjoyment that he received as a forty-two year old hockey player.

As a youngster I always enjoyed sports just for the heck of doing sports. I don't play "old timers hockey" just to be a fitness freak, I go out there because it's fun to play. When I was younger I used to play every sport known to man with varying degrees of success. It's only when you start doing these things again that you find out how much fun they are. Consequently, I have become a renaissance man in terms of picking up sport again.

These feelings were the exception rather than the rule for the *Adopters*. Seven of the men emphasized the physiological benefits which they perceived were associated with regular involvement in physical activity. Two men described their ambition to be considered physically fitter than other men of their age. Six of the *Adopters* expressed their concern with long term health, and the problems of excess body fat, heart disease, muscle weakness and other conditions associated with hypokinesia. These ideas reflected the large body of research which has suggested that the noticeable indicators of aging provide a significant impetus for middle-aged men who suddenly become involved in physical activity (Hepworth and Featherstone, 1982). The salience to middle-aged men of the most extreme form of decreased physiological functioning — death has been the focus of a number of theorists concerned with the characteristics of mid-life (Lifton, 1976; Jaques, 1965). The middle-aged man is faced with an awareness of the physical effects of aging, growing children, increasingly elderly parents, and the 'unexpected' deaths of relatives, friends, and acquaintances who were in the same age category. Although these events may be a source of deep concern in themselves, it has been argued that it is an increasing sense of mortality which causes far more anxiety (Eassom,

1983). It appeared that the possibility of a premature death, for one of the *Adopters*, was a particularly influential factor in producing major lifestyle changes.

Sometimes I think I have an inordinate fear of death. It is very psychodynamic. It has certainly become clear in the last two years that there are ways to die and ways to die. I wasn't conscious of this until recently. What really got to me was — if I die because of my own stupidity then I'd be really pissed off. That's the worst for me — to know that I've got heart attacks in my family, overeating, alcohol. If I'm going to die it will be because the system malfunctions on its own — not because of my stupidity. That is a big factor.

Finally, one of the *Adopters* described a unique justification for his increased level of involvement in exercise. Although obliquely related to feelings of well-being, it appeared that the enjoyment resulted from the completion of the task, rather than from the exercise itself. In addition, this man also differed from the remainder of the group in his apparent lack of enthusiasm for his active lifestyle, and expressed his distaste for others eager to discuss their involvement in exercise.

Exercise has its daily place. It's a chore that I do. I view exercise sort of like religion. I think it's a bunch of bullshit what these guys say about how much they enjoy doing it. What I enjoy about it is having done it for the day. I feel so virtuous. It must be sort of like going to mass — you might enjoy it at the time but what's really good is that you feel virtuous for the rest of the day. You're somewhat better than everybody else. There's nothing quite like sitting down and being able to relax and breathe after having done some exercise. But the process itself I find about as interesting and exciting as washing dishes or taking out the garbage. I'm sure some people actually enjoy the ritual of the exercise. There are two kinds of people who I find disgusting: those people who want to tell you about their exercise habits; and those who want to tell you how hard it is to quit smoking.

INFLUENCES ON INVOLVEMENT IN PHYSICAL ACTIVITY

The process of male adult development was clearly implicated in the involvement of the *Adopters* in physical activity. However, it was also apparent that the impact of the increased emphasis by society on involvement in exercise was also important. Unlike the *Perennials*, the *Adopters* did not describe supportive spouses, autonomous jobs or the contribution made to

their involvement in exercise by social interaction. However, their adoption of an active lifestyle appeared to reflect the acquisition of behaviour through mechanisms of social learning. The protagonists of social learning theory reject the notion of unidirectional determination of behaviour by events in the environment in favour of a strongly interactionist viewpoint (Bandura, 1981). Environmental, cognitive, and personal events are regarded as the major elements in a dynamic equilibrium. Within this context, social learning theory emphasizes learning through observation and this process is regarded as the most common method of learning within society (Bandura, 1977). The active involvement of the individual in observing and selecting a course of action, based on the interpretation of the observations, is central to this process.

The apparent psychological readiness of the *Adopters* for involvement in exercise appeared to be augmented by changes in attitude. The conclusions of an attitudinal study conducted in Australia indicated that 59% of the general population held positive attitudes towards involvement in exercise (Task Quantum, 1975). These results did not reflect the low levels of involvement in exercise which were established in the study. However, it appeared that, for the *Adopters*, a change in attitude was an important precursor of an increased involvement in exercise.

I think exercise has probably become more important in the last three or four years. When I started to become more active I'd hit bottom in a sedentary kind of life. I had given up a lot of activities. But I was kind of persuaded by television ads and various other things and I began to believe it was important to be fit and I saw the obvious results of being fitter. I got some feedback.

The influence of active peers also appeared to be important. Research has shown that men of high socioeconomic status, such as the *Adopters*, tend to be more active than any other group in society (Canada Fitness Survey, 1983). Consequently, it is not surprising that the *Adopters* observed some of their peers leading active lives and were encouraged to become more active themselves.

I'm a victim of television. It's just sort of evolved. Slowly I slid into it — the more I saw other people doing it the more I thought I'd better do something about it myself. I see other people that are fit and it seems to me that I aspire to be fit like them.

SUMMARY

The nine *Adopters* identified in this study were all men who had led inactive lives for many years after being involved in sporting activities until young adulthood. Their renewed interest in involvement in physical activity had occurred as each of the men approached the age of forty. Although there did not appear to be any single cause of this action which was common to all of the men, it appeared that the characteristics commonly associated with male adult development, described at length in Chapter II, was extremely influential. After periods of relative stability which lasted for several years, each of the *Adopters* appeared to have made decisions which had resulted in change to the prevailing life structure. Whilst some of these changes were quite subtle, others involved more noticeable changes in lifestyle. The *Adopters* placed little emphasis on the feelings of well-being associated with involvement in exercise. As a group, they seemed more concerned with their beliefs in the contribution made to physiological functioning and longevity by regular involvement in exercise. Finally, it appeared that the *Adopters* were greatly influenced by the society of which they were a part. The influence of both television and the behaviour of peers appeared to reflect the importance of social learning in the acquisition of new behaviours.

PROFILE: MURRAY CLARKE, REJECTOR

I have an absolute commitment to my academic career and it all centres around that. This is what I do, this is what I get the fulfillment from, this is what creates the stress. This is what makes me react to stress by reading the newspaper, watching the tube, having a gin and tonic. Putting all those things together, I have created a personal environment which makes it very difficult to get off my rear end and actually do something which I do honestly think is

worthwhile.

Murray Clarke was an efficient and highly organized associate professor in a medium sized department within the university. His brusque manner and apparent impatience appeared to be more indicative of his industriousness than of his personality. Intelligent and highly articulate, he spoke with little humour. At the age of thirty-eight he had recently become a father for the first time and believed that the resulting changes in his life had not required as big an adjustment as he had expected. Murray was extremely career-oriented and believed that several papers he intended to publish within the ensuing three to four years would mark the peak of his academic career and the culmination of his research for the previous ten years. With the exception of a brief attachment to an exercise class ten years before his interview, Murray had not been involved in either formal or informal physical activity since his youth. The results of his fitness test prompted Murray to endeavour to lead a more active life. With limited success, Murray tried to jog or ride a stationary bicycle three or four times a week for about twenty minutes.

06:20 Up earlier than usual and earlier than I had set the alarm. Too hot, didn't sleep as well as I'd hoped. Slept in the basement: previous couple of nights I'd been kept awake by our four week old son, Daniel. Since Jane is breast-feeding him, there's little I can do to help, so I decided to sleep downstairs because I have a lot scheduled today (no drinks last night, so felt reasonably good). Made tea, watched the television news and had two cigarettes while drinking tea (usual routine).

07:00 7:00 Jane and Daniel up. Made Jane some tea then rushed through shower, drying hair, dressing, packing my briefcase to catch the 7:35 bus (usually drive, but decided to take the bus after two days of heavy snow). I wanted to do some writing early in the day because I have appointments scheduled after ten o'clock. I'm trying to work on the report of a study I conducted in the summer. Although this is my most important project it keeps getting pushed aside because of classes; class preparation, administrative paperwork, and sundry interruptions, including new family obligations. I am often tense and bad tempered as a result, but I'm very conscious of this. I try to get by, by staying organised and scheduling everything. I probably drink too much as a result too.

08:05 Arrived on campus. Straight up to the coffee room for a large coffee and two milks to take to my office. I hardly ever break this routine — I find it hard to start without coffee. One of the milks is for tea. I usually have two large mugs each day at school:

one in the morning; one in the afternoon. I'm a tea addict.

- 08:15 Arrived in the office. Drank the coffee and smoked two cigarettes while writing this report.
- 08:40 I've put the desk light on but not the room light and kept the door shut so that people don't know I'm here. Should be able to get an hour-plus of writing between now and ten o'clock.
- 09:20 Wrote a couple of pages of reasonably good quality. Three interruptions — par for the course. Incidentally after having made a pot of tea, I began to write this report and lit a cigarette, almost without realizing it. Also smoked one while writing earlier.
- 09:30 Reviewed the file of an applicant for a job in the department to be interviewed at ten o'clock. I am on the selection committee.
- 09:40 Checked the mail, none for me so returned to report writing for fifteen minutes. Have managed to accomplish a fair amount of writing this morning, so I'm feeling quite pleased, relaxed and not as 'rushed' as I often am by this time of the day.
- 10:00 Smoked two cigarettes in the last half an hour, I'm a bit nervous as I have never been in an interview as an interviewer before.
- 10:50 Left to get ready for class at eleven. Didn't ask any questions — somewhat boring experience. Smoked a cigarette and had a brief discussion with a graduate student.
- 11:00 Actually a test, not a class. Main problem is marking, which is the single aspect of this job that I detest the most, so I'm not looking forward to tomorrow. Caught up with the diary and used the rest of the time to work on my report.
- 12:00 Graduate class, ate sandwich/milk lunch during the class. Reasonably interesting discussion, but students hadn't really understood what they had read, so a bit frustrating. Called Jane, had a quick chat. Got ready for next class. Seventy-five students, 300-level course. Performed reasonably well.
- 15:00 Made afternoon pot of tea, checked the mail. Usual bi-weekly 'office hours'. Constant stream of people. Felt satisfied that I had helped a few. Probably smoked ten cigarettes since noon. I usually like to catch the 4:46 bus home, which means leaving the office at four-thirty. Today I will take the 5:16, so I have twenty minutes to spare. Too late, too tired, and too short a period to do any 'real work', so I will relax by 'playing with' the computer.
- 18:15 Took the 5:00 bus. It was full, but I got a seat. Had a drink (gin and tonic), held

Daniel for a few minutes then unpacked my briefcase. Spent a few minutes preparing exam papers for marking tomorrow. Smoked two to three cigarettes. Television news is on as I am writing. Will have another gin and tonic before and during dinner, after which we will get ready to go out to Jane's theatre group practice where we are taking Daniel to 'show him off'. Unusual evening in that we usually stay in especially recently, and watch television or read. I rarely work in the evenings, especially after a long day like today. I should go out and shovel snow from the driveway, but snow is not expected tonight so I'll do it tomorrow, since I will be working at home, and it will be something I can do to break up the boredom of the marking. I should also do some exercise, which I've been trying to do since I took the fitness test — but I don't feel like it — I'd rather relax with a couple of drinks and eat supper.

- 21:28 Had dinner — lasagne which Jane had prepared and frozen before she had the baby. I often do the cooking, but would not have had the time to do so tonight. Went to theatre group, just a few blocks away. I held Daniel for most of the time while Jane and the others rehearsed the play. Arrived home about nine o'clock. I decided to shovel the snow off the driveway, as I haven't done much physically today, and it is at least some exercise. Finished at 9:20. Jane had made coffee while I was outside, so I'm having a coffee, cigarette, and a glass of liqueur while writing this report. I've lost count of the number of cigarettes today. Probably about twenty-five, possibly more. Daniel is feeding and quiet right now, he'll go to bed soon and so will Jane. I may watch the news, but expect to be in bed by 10:30. May read for a bit, depends on whether or not Jane still has the light on.

This was an unusually long day, with a fairly early start, and something to do in the evening rather than sitting in front of the television. It was quite a satisfying one, however, as I feel I have accomplished a few worthwhile things, and, though I'm tired, I'm not as exhausted as I often am in the evenings at this time. This may partly be a result of some late physical activity — though clearing the driveway isn't exactly preparation for the Olympics, it's as much if not more than I often do. I'm sweaty, and my muscles ache a bit. There's probably some effect also simply of keeping this record. Being explicitly conscious of what one does and how one feels about it helps to stay calm, particularly in circumstances that might normally be stressful or frustrating.

Thursday, am.

Stayed up until 11 pm. Watched television, had another glass of liqueur and smoked a couple of cigarettes.

THE REJECTORS — NOBODY IS TELLING ME I CAN'T EXERCISE

I don't participate in any kind of organized activity. I don't make any effort. Intellectually, I can accept fitness as an important part of human existence but I make no effort to do anything about it. I've never participated in anything and I never will I have a basic lack of internal motivation and self

discipline. Nobody is telling me that I can't exercise. And time, it does take time. Deep down I think that I do enough, physically, to keep the old body working. I could do more — obviously — but I just don't think the added effort is worth it. If you peered into my psyche and so on — I am worried that I'm always tired and so on and I don't go to sleep. I only sleep five or so hours a day. Sometimes, not even that. It's easy to see the logic and desirability of all sorts of things. I don't have to be convinced about the truth of all these things — just because it's true doesn't mean I do anything about it.

INVOLVEMENT IN PHYSICAL ACTIVITY

Eleven of the men who participated in the study had included relatively little involvement in physical activity in their lives. At the time of the interview, each of the *Rejectors* reported that he was not involved in any regular exercise. Three of the men reflected activity levels comparable with those expressed in the quotation presented above. However, eight of the eleven men did report being involved in some kind of physical activity on an irregular basis. These activities, with one exception, were associated with summer. They included seasonal sports such as tennis, golf, swimming, cycling and sailing. One of the *Rejectors*, who occasionally went kayaking during the summer, was more active during the winter as he played hockey once a week in an 'over 35' hockey league. In addition to the sporting activities described by the *Rejectors* three men in the group indicated that they made an effort to include other fitness-promoting activities in their everyday lives. These activities included walking short distances rather than using a car or public transport, and using the stairs rather than an elevator. The range of activities reported by the *Rejectors* did not indicate that the group, as a whole, led sedentary lives. However, the levels of exercise reported by the *Rejectors* did not meet the minimal requirements of the definition of 'regular physical activity' provided in Chapter II.

The *Rejectors* demonstrated a stability of non-involvement in exercise which was not evident in any of the remaining three groups identified within the sample. Whilst four of the men reported sporadic involvement in exercise since leaving school, the remainder of the group

greatly reduced the level of their involvement in physical activity after leaving the organized sports of high school. Four of the *Rejectors* described the way in which they avoided organized sports throughout their school days as a result of their dislike for exercise.

I can remember when I was a kid. I used to cut out of things. I remember this as being the first time that I actively challenged the system. I hated cross-country running. I could see no purpose in it at all, so I'd cut out. I'd get a detention. They'd tell me to write an essay and the funny part was that I was so much happier sitting there writing.

In view of feelings such as those expressed above, it is understandable that this man, and other *Rejectors* like him, had little enthusiasm for voluntary involvement in exercise later in their lives.

AGE AND INVOLVEMENT IN PHYSICAL ACTIVITY

Eight of the eleven *Rejectors* clearly expressed their concerns about aging. These concerns appeared to fall into two major areas. The first of these areas was related to the conception of time.

I'm very conscious of my age, or the age period that I'm in. I always have to think how old I am. I'm in my late thirties but I only feel nineteen some of the time — and I mean that seriously. It's quite a shock. It's literally now twenty years since I left high school. One of the major influences on my life was a trip I made to Europe, and I can remember every day as if it was yesterday. I suddenly realized; that's nineteen years ago. That's half my life ago. I'm very, very age conscious.

Several other *Rejectors* made comments which were related to changes in the way in which their lives as a whole, in relation to the passage of time, were being perceived. Research has shown that this phenomenon is one of the fundamental processes associated with the advent of middle age (Neugarten, 1975). In the first half of life, time is commonly perceived as 'time since birth'. In contrast, this conceptualization begins to change in middle-age as time begins to be viewed as 'time until death'. A dramatic illustration of this process was provided by one of the men in this group, who believed that an increased concern with physical fitness, and with the

course of his academic career, was associated with the aging process.

I'm getting more concerned about physical fitness than I used to be. I'm forty-one. The approach and passage of forty has made me worry more about things like that. I'm getting old — my life is passing away. My life is half-over. I'm an achievement oriented person and that means that half of my experience and contribution to science is finished. Things like that really bother me.

The second major area in which the *Rejectors* expressed their concerns about aging was related to the decrements in physiological functioning which they believed were associated with advancing age. There are obvious cosmetic changes which accompany middle-age. However, the level of physiological functioning of a typical forty year old man is not significantly different from that which the same man experienced during his twenties (Levinson et al., 1978). Despite this fact, it appeared that the *Rejectors*, as a group, perceived a decrease in their physical capabilities. However, this did not appear to be a cause for concern for nine men in the group. These men believed that they were not restricted in their everyday lives. However, the two remaining *Rejectors* believed that their lack of fitness did impose restrictions on their lives. In particular, they believed that their lack of fitness prevented them from working to their full capacities. The failure to be involved in any fitness-promoting activities appeared to promote anxiety, particularly in relation to the future.

I see it as a 'Catch 22' sort of thing. If I was fitter, I'd be able to do more, but I can't find the time or the inclination to become fitter now because I get so tired doing what I am doing. Basically, I'm foreclosing the option of investing for the future.

IMPORTANCE OF INVOLVEMENT IN PHYSICAL ACTIVITY

The quotation presented above epitomizes the ambivalence with which the *Rejectors* viewed the importance of being involved in regular exercise. Although not all of the group members were as concerned about their inactivity as those mentioned above, positive attitudes towards involvement in physical activity were predominant. This was clearly evident in the

profile of Murray Clarke, presented earlier in this chapter. Murray made a number of comments related to his belief that he 'should do some exercise'. This reflected one of the most common findings in research related to involvement in exercise. Although positive attitudes towards exercise are held by the majority of the population, the majority of the population lead relatively inactive lives (Task Quantum, 1975). This scenario has been established in relation to many other everyday situations and reflects a basic assumption made in psychology: an attitude does not necessarily reflect a corresponding behaviour (Sedgewick, 1980). The *Rejectors* shared many similarities with the other members of the sample. They were intelligent university professors who had the same access to time, money and sporting facilities as their peers. They were aware of the potential physiological and psychological benefits which are commonly associated with regular involvement in exercise. However, they had made an informed choice not to become involved in any regular exercise. Although, a number of factors were regarded as contributors to this course of action, it appeared that the major reason for avoiding exercise was that it was not enjoyable.

The *Rejectors* considered exercise to be a painful, repetitive, boring process which did not justify the investment of their valuable time. In addition, they believed that involvement in most forms of physical activity required the effort of organization, the element of competition, and at least some expense. One man believed that his lack of any skill in physical activity was a major deterrent from any involvement. In view of these beliefs, it is hardly surprising that these men did not include exercise in their everyday lives. Although the importance of involvement in exercise could be rationalized on the basis of several grounds, such a rationalization did not overcome the avoidance of an activity considered unpleasant.

INFLUENCES ON INVOLVEMENT IN PHYSICAL ACTIVITY

The most important influence on the extent to which the *Rejectors* were involved in physical activity was succinctly stated by Murray Clarke, who was profiled earlier in this

chapter. Murray believed that he had created a personal environment which made it very difficult to include any form of exercise. To some extent, Clarke appeared to regret this situation. However, his personal environment, like those of the other *Rejectors*, was the product of decisions he had made about his life structure and his resultant lifestyle. Like the majority of the population, Clarke and the other *Rejectors* held positive attitudes toward exercise. Although the origins of these attitudes were unclear, the enormous emphasis placed on an active lifestyle by modern society is inescapable and the benefits attributed to regular involvement in exercise are widely reported in all forms of the media. In addition to their positive attitudes towards fitness, the *Rejectors* reflected the characteristics of socioeconomic status most commonly associated with involvement in exercise. Despite each of these influences, the *Rejectors* avoided any commitment to exercise because they believed it to be an activity less enjoyable than the others in which they chose to be involved. Consequently, their personal environment did not support involvement in exercise. Involvement in physical activity was not something they valued, it was not part of their routine, and it was not something which they missed.

SUMMARY

Eleven men who participated in the study rejected any commitment to involvement in physical activity. Although involved in a variety of seasonal sports, the *Rejectors* participated on a casual, irregular basis. Each man had reflected this pattern since young adulthood, and several of the group members recalled avoiding involvement in organized sport throughout their school life. Like the other groups identified in this study, the *Rejectors*, as a group, were aware of the advent of middle age, and they perceived a resultant decrease in physical capabilities. Although this was not considered a problem by the majority of the group members, it appeared to cause two men some degree of anxiety. Despite their positive attitudes to physical activity, the *Rejectors* did not associate exercise with enjoyment. Understandably, this resulted in their avoidance of any regular involvement in exercise and was indicative of a personal environment

in which physical activity was regarded to be of minimal significance. The choices made by the *Rejectors* in relation to occupational, familial and personal interests resulted in a life structure based on a hierarchy in which involvement in physical activity could not compete for status.

PROFILE: JOHN NELSON, RELEGATOR

I realize the value of physical fitness, but it has become less important than things like my work. That decision takes time away from opportunities to exercise and change my fitness levels

John Nelson was a thirty-five year old associate professor in a tenure-track position within the university. After having completed undergraduate and graduate studies in different academic fields he was, at the time of the interview, working in an area which was peripheral to his central interests. His critical evaluation of the university milieu and, in particular, its rigid hierarchy, revealed a great deal of frustration. Despite an outstanding academic, teaching, research and publication record, Nelson believed that his rate of progress within the university system was identical to that of a man without such a record. After leading an active life throughout youth and early adulthood, John retired from competitive sport three years prior to the interview. This coincided with the appointment to his present position within the university, and the birth of his first child. At the time of the interview, John and his wife were expecting their second child. Quiet and well-spoken, John gave the impression of being conscientious, hard-working, and pressed for time.

06:00 Out of bed.

06:10 Ate breakfast — consisting of a bowl of cereal with milk and sugar. Showered, dressed, left for the university.

07:30 Arrived at the university. Went to my office and collected materials for class.

- 08:00 Taught two classes in succession and returned to my office for some paperwork and administration.
- 10:15 Walked over to another building for a meeting with a department Chairman, then returned to my office. More paperwork in the office and appointments with two students.
- 12:30 Went to the cafeteria on the top floor of the building for lunch. Lunch consisted of a large cup of coffee (cream and two sugars); a cheese and tomato sandwich; a granola bar, and an orange. I had not eaten or drank anything between breakfast and lunch.
- 13:30 Returned to my office and resumed some more paperwork. Visited the general office on the fifth floor three times before three o'clock — each time I used the stairs and not the elevator.
- 15:00 Left the university and returned home. Made a cup of tea (milk and 1/2 teaspoon of sugar).
- 15:40 I felt tired — so I lay down to rest. My three year old daughter decided to join me, so that ended my rest.
- 16:00 Changed into jeans and a casual shirt. Took my daughter to the swimming pool for her swimming class — parent and child. Drove down in the car. Changed and went into the pool for the duration of the half-hour class. Showered, changed back to street clothes and drove home. Drank a cup of tea (milk and half a teaspoon of sugar). Ate one large, homemade, chocolate chip cookie.
- 17:40 Left home and drove to attend a Dinner Meeting. Arrived at the hotel to meet with the association. (I was their invited after dinner guest speaker). Drank a bottle beer before dinner.
- 18:45 Sat down to dinner: one bread roll and butter; small bowl of chicken vegetable soup; 6 ounce steak (like cardboard, so I ate less than half); several small carrots; sweet corn; two small fried potatoes; strawberry mousse for dessert; half a cup of coffee (cream and two sugars).
- 19:30 Began the presentation of a lecture on management systems and their implications for small businesses. The lecture continued for two hours — no break, no refreshments.
- 21:30 Talked about the lecture, personal experience and answered questions. Left for home.
- 23:00 After talking with my wife, I had a bowl of breakfast cereal (milk and sugar), followed by a mug of decaffeinated coffee (cream and one teaspoon of brown sugar). Another

chocolate chip cookie.

23:55 Turned on the television while I sat, relaxed, and read the two daily newspapers.

00:35 Retired to bed.

THE RELEGATORS — I HAVE A CONFLICT OF PRIORITIES

My concern for fitness has remained the same but in recent years I haven't done very much about it. If anything, I'm becoming more and more aware of the need to get back into shape. It's just that I have a conflict of priorities in raising the children, looking after the house and things like that.

INVOLVEMENT IN PHYSICAL ACTIVITY

Seven men who participated in the study were identified as *Relegators*. Each of these men reported a low level of involvement in physical activity. The levels of activity reported by the *Relegators* were similar to those reported by the *Rejectors*. However, in contrast to the *Rejectors*, the *Relegators* had led active lives within the five year period prior to the interview. Consequently, their inactivity produced a pattern of involvement in exercise which was in direct contrast to that reported by the *Adopters*.

Like the remaining men in the sample, each of the *Relegators* described being involved in organized sport during school. Each man had also been involved in some form of regular exercise during his later years as a student. However, four of the seven men in this group reported sporadic involvement in physical activity before a firm commitment to physical activity had been made later in life. The *Relegators* had been regularly involved in sporting activities including fitness classes, swimming, squash, running, and basketball. One man acted as a referee of soccer matches, in a junior league, for several years. Three of the *Relegators* had played sport competitively.

This situation had changed drastically. In fact, at the time of the interview, the *Relegators* reported levels of activity which were lower than those of the *Rejectors*. Five of the seven men reported not being involved, even occasionally, in any form of physical activity. One of the remaining two men, a former competitive runner, reported running a week before the interview. The occasion on which he ran prior to that was 'months ago'. The final group member, a man who had previously played squash competitively, still played 'infrequently' and occasionally went swimming with his young children. Age appeared to be a major influence in the changes associated with the activity patterns of these seven men.

AGE AND INVOLVEMENT IN PHYSICAL ACTIVITY

The *Relegators* resembled the remaining three groups in their description of their awareness of the fact that they were aging, and that physical deterioration was an element of the aging process. Four of the men specifically stated that they were finding it much harder to maintain the physical fitness that had once been maintained without conscious effort. For one of the *Relegators*, the decrement was perceived to be more global than one limited to physical fitness. He believed that he had passed his academic peak — a time in his life which he associated with a high level of physical fitness.

I'm realizing I'm getting old and I would like to stay young physically. I think I was at my peak, academically, five years ago. I'd like to get back to those days. I was also very fit then — squash, running, swimming and bicycling constantly, but now I do nothing other than a bit of walking.

The average age of the *Relegators* (39.57 years) was not significantly different from the average age of the sample as a whole (40.07 years). However, the group consisted of three men aged thirty-five, one aged forty, one who was forty-two and two who were forty-five. The changes in involvement in physical activity observed in the younger men appeared to be closely related to the influence of a particular period in the process of male adult development. The *Settling Down* period of a man's life, which occurs during the fourth decade, constitutes the

culmination of early adulthood in the realization of goals identified earlier in life (Levinson et al., 1978). During this period, a man is faced with two major tasks, centred on the major components of his life structure. Firstly, a man is faced with trying to establish a niche for himself in society by consolidating his life more firmly in his familial, occupational and social endeavours.

I've experienced a change in value system. I've had tremendous pleasure this year from writing. It's the first year for several years that I haven't had to prepare new classes and I've derived incredible enjoyment from writing papers based on stuff and research I've had for a few years.

The second major task associated with the period of 'settling down' is the attempt to advance within a time frame. The process of 'settling down' develops with the accomplishment of previously identified goals and the resultant increase in rewards, pressures and responsibilities (Levinson et al., 1978). Each of the thirty-five year old *Relegators* reflected this process. Each had been appointed to a permanent position in the university, and each man had fathered his first child within the five year period prior to the interview. One *Relegator* described his goals and achievements in the four year period prior to his interview.

I was doing my Ph.D. and trying to get established in a job that I wanted in an area I wanted, both area of study and geographical area. I finished my Ph.D. in a little over three years and I worked full-time for two of those years.

In the context of the demands made by the process of 'settling down' it appeared that each of these men had questioned the importance of a commitment to involvement in regular exercise.

IMPORTANCE OF INVOLVEMENT IN PHYSICAL ACTIVITY

Although apparently not subject to the demands of 'settling down', the remaining three *Relegators* also appeared to have questioned their involvement in exercise. For the forty-two year old, a recent shift to an inactive lifestyle appeared to be one of a number of changes made in his life. Soon after his interview, this man, who was single, resigned from his job at the

university and moved to another part of the country, where he intended to seek work outside the university environment. The remaining two men, at the age of forty-five, appeared to have decided that involvement in exercise was not as important as it had been several years earlier. Although aware of occasional feelings of guilt, one of the men could no longer find the time to swim three nights every week.

Every three or four months, I decide that I should go and do something active, but I don't seem to be able to do anything about it. There's just too much going on. There are just too many things that I am interested in.

The changing degree of importance attached to regular involvement in physical activity was also clearly illustrated by the other forty-five year old man in this group. After refereeing soccer matches regularly for several years, he was no longer involved.

Exercise is not as important as it should be, or as it used to be. I'm now one of those guys who thinks "Gee, I really should be doing more" — but I tend not to do it. I know what needs to be done and I should be doing it. I suspect that I just avoid it. The end is wonderful but I'm just not prepared to put up with the means any more

Each of the older *Relegators* had decreased their involvement in activity significantly since their early forties. They had led reasonably inactive lives since their young adulthood and it appeared that the activity evident in their lives several years earlier was quite uncharacteristic. Had this study been conducted several years earlier, these men may have been regarded as *Adopters*.

It was evident that each of the four younger *Relegators* had made decisions about the importance of their involvement in exercise based on the demands of their prevailing life structure. Although physical activity had once been regarded as an important part of their lives, the time required by the major elements of their lives, at the time, had resulted in their involvement in exercise being relegated to a place of lesser importance. These tasks were predominantly associated with the demands of work, family and household responsibilities. Like the *Rejectors*, the *Relegators* had developed a life structure in which involvement in exercise occupied a position of low priority.

INFLUENCES ON INVOLVEMENT IN PHYSICAL ACTIVITY

The *Relegators* had chosen to decrease their involvement in exercise. Four of the men clearly indicated that they believed their activity levels were the direct result of choices that they had made in relation to the priority of other aspects of their lives. Although they believed that they would like to be involved in exercise, as they had been in the past, it appeared that they were unable to justify such a choice.

I aspire to be very fit and healthy, but it is a question of disciplining myself. Right now it's a choice between spending time in the evenings with the children or doing exercise and I would rather spend the time with the children, but I'm very much aware of fitness being very important to one's lifestyle My involvement in exercise has really decreased a lot. In retrospect, if I had to relive my last three or four years I would just live in an apartment. I bought a house, but it requires so much work.

The man who made the comments presented above, and two other *Relegators*, expressed regret that decisions made in previous years had resulted in their decreased levels of involvement in exercise. More importantly, each man expressly stated that he was attempting to change the situation, and assign involvement in exercise a higher priority in the future. John Nelson, whose profile was presented earlier in this chapter, exemplified this process. The course of the past few years of Nelson's life, although providing him with stability, had also produced a great deal of anxiety. Part of this anxiety appeared to be related to his decision to leave competitive sport and concentrate on his career. The feelings expressed by Nelson during his interview suggested that he would make significant changes to his life structure in the ensuing years. At the age of thirty-five, Nelson appeared to be addressing issues of major significance in his life. Although he had anticipated steady progress in his job, he believed that his progression within the university system had not reflected the time or quality of his contributions to the department in which he worked.

The emphasis I place on fitness is certainly not as high as it has been, or as it should be. The difference between theory and action is of great concern to me. I'm going to plan my time differently in the future. I've realized that in this

university whether you do anything or nothing, the physical rewards are just the same. I'm becoming numb. I've realized that the system is not geared towards promoting or rewarding excellence. Consequently, I'm going to start to put other important things in my life forward — rather than neglect them. Things like health, family and my leisure interests I'm not doing any exercise at all. It bugs me and I feel guilty about it. It's resulting in me questioning my sense of values, and I'm determined to make a change.

SUMMARY

The seven men in the study who were regarded as *Relegators* reported a low level of involvement in physical activity. In contrast to the *Rejectors*, each of the *Relegators*, had been actively involved in regular exercise within a few years prior to the interview. With the exception of one man, the group was composed of the oldest and youngest men in the sample. The younger men appeared to have modified their involvement in exercise in view of the processes associated with the 'settling down' period of male adult development (Levinson et al., 1978). This was reflected in their comments about the great demands made by occupational and familial responsibilities. These factors had apparently been major influences on their decisions to relegate the position of physical activity in their lives to one of reduced priority. In three cases, this decision had appeared to result in some anxiety and a resolve to change the situation in the future. The older men in the group had also reduced their involvement in exercise. In contrast to the younger men in the group, these men did not describe the influence of specific factors in their lives which had resulted in their increased level of inactivity. However, it was apparent that involvement in exercise was not regarded as highly as it had been during their early forties. The history of involvement in exercise described by each of these men, with the exception of their recent inactivity, appeared to parallel that reported by the *Adopters*. This similarity further emphasized the possibility of a direct link between involvement in exercise and the psychosocial processes of male adult development.

CONCLUSION

The levels of activity reported by the men who participated in this study differed greatly. However, patterns were observed in the reports of the stability of involvement in exercise. Two of the groups identified, the *Perennials* and the *Rejectors* reported stable levels of involvement. The *Perennials* had led active lives for many years. In contrast, the *Rejectors* had been relatively inactive in the years prior to the interview. The remaining two groups which were identified in the study reported a more unstable history of involvement in exercise. The *Adopters* had each increased the amount of exercise which they included in their lives after varying periods of inactivity. Conversely, the *Relegators* led quite sedentary lives after years of involvement in various sporting activities.

The contribution made by regular involvement in exercise to the lives of the *Perennials*, appeared to be related to the feelings of well-being that it promoted. Participation in regular physical activity was a central component of the lives of these eleven men. As such, it received a significant amount of time and energy in everyday life and its place in the life structure did not appear to be questioned. A similar situation, with one major difference, was evident in the lives of the *Rejectors*. Once again, the value assigned to involvement in physical activity did not appear to be questioned. However, in contrast to the *Perennials*, exercise was not a central life component. Consequently, it received little recognition, time or energy beyond that associated with casual involvement in sporting activities.

The concern of this group of middle-aged men with issues commonly associated with the process of male adult development was demonstrated in Chapter II. It was evident in the material presented in this chapter that these issues also had some relevance to the levels of involvement in physical activity reported by the *Adopters* and the *Relegators*. The nine *Adopters* appeared to attach a great deal of importance to involvement in exercise as one outcome of a number of modifications to their existing life structures. Although some of these changes appeared minimal, others were associated with occupation, personal relationships, and lifestyle.

The contribution to their lives made by their involvement in exercise appeared to result from the its psychological significance and the perceived benefits for physiological functioning. The seven *Relegators*, with one exception, were either thirty-five or forty-five years of age. The younger men were clearly subject to pressures of consolidating their careers and families. In this personal and social milieu, the time commitment to regular involvement in exercise could not be justified. The older men also appeared unable to justify the place of activity in their lives. This was in marked contrast to the importance which they had attached to exercise during their early forties.

This chapter has provided a broad overview of some of the major differences between the men in the study in relation to their involvement in regular physical activity. The material presented throughout this chapter provided some information about the place of physical activity in the lives of this group of middle-aged men. However, the interviews and fitness tests contained far more evidence of the complexity of this situation. This material will be examined in the following chapters. The first of these, Chapter IV, will focus on the fitness levels of the men in the study, the ways in which the men perceived their levels of physical fitness, and the relationship between the two.

Chapter IV

FITNESS: REAL OR IMAGINED?

I am increasingly concerned about fitness — the age factor is the big thing. I think that as you get a bit older the surroundings tend to affect you more and you get told all the time that when you reach a certain age the body no longer functions as well as it did. My conception is that maybe forty is an important turning point. That is just my feeling — whether it's right or wrong of course, I don't know.

INTRODUCTION

Physical fitness is one of the concepts associated most commonly with regular involvement in exercise. However, despite the frequency with which the concept is used throughout modern society, there is little consensus over its meaning (Hebbelinck, 1984). A lexical definition provides little clarification. Fitness is defined in the Oxford dictionary as 'well adapted or suited to some purpose' (Sykes, 1983). The purposes for which fitness may be required obviously vary greatly between individuals, depending on the demands made by the course of everyday life. Although there are numerous factors which contribute to these demands, the material presented in the previous chapter indicated that the men who participated in this study reported different levels of involvement in exercise. Consequently, the primary aim of this chapter was to examine whether these differences were associated with a number of aspects of the concept of fitness. Three areas were investigated. Firstly, the way in which fitness was defined by each man in the study was examined. Secondly, a standardized operationalization of fitness was adopted and the fitness level of each man was measured on a number of different dimensions. The results of the evaluations of fitness were then considered in relation to the levels of involvement in exercise reported by the men. Thirdly, the self-perceptions of physical fitness made by the men, based on the same dimensions assessed in the fitness evaluation, were compared to the results obtained from the evaluation itself. A

detailed examination of each of these areas will be followed by a review of some of the comments made by the men about the relationship between fitness and their increasing age.

DEFINITIONS OF FITNESS

As part of the interview, each man was asked the question "How do you define physical fitness?" (see Appendix 1: *Interview Schedule*). A wide variety of responses was obtained. As expected, there was little agreement on the meaning of the concept. Although some men provided simple and straightforward definitions, the majority identified several dimensions which they considered to be salient. Consequently, each definition was reduced to its constituent parts before the content of the responses was analyzed. This resulted in a total of 96 components. Content analysis resulted in the identification of ten major areas within which the various components of the definitions could be classified. Table 1 illustrates the distribution of responses over these areas as a percentage of the total responses of each group.

Table 1 : Definitions of Physical Fitness.

	PERENNIALS	ADOPTERS	REJECTORS	RELEGATORS
	% of Total Responses ¹	% of Total Responses ¹	% of Total Responses ¹	% of Total Responses ¹
Feelings of Well-Being	27.58	4.16		25.00
Unimpaired Functioning	20.68	29.12	34.78	10.00
Cardiovascular Endurance	10.34	12.50	8.69	15.00
Strength/Muscle Tone	10.34	12.50		15.00
Mental Performance	6.89	4.16		5.00
Optimal Weight	10.34	20.83	8.69	5.00
Absence of Disease			43.47	
Exercise Capabilities	6.89		4.34	25.00
Healthy Lifestyle	6.89			
Better than Average Man		16.6		

¹ Percentages may not total 100% due to rounding.

In their attempt to define fitness, it was evident that each of the groups attached varying degrees of significance to the different dimensions of the concept that were identified. The responses made by each of the groups will be examined more closely before a summary of the major differences between the groups is presented.

THE PERENNIALS

The *Perennials* identified several different aspects of fitness in their efforts to define the concept. Their long-term involvement in physical activity appeared to have resulted in an awareness of many different factors which they considered to be important. Although three major areas of emphasis were identified, a bias towards the feelings of well-being associated with exercise was evident throughout their responses. Comments related to feelings of well-being accounted for 27.58% of the group total. These sentiments are commonly reported as a result of involvement in regular exercise (Morgan, 1980). However, the *Perennials* clearly indicated the importance of these feelings as their means of defining fitness.

Fitness is a combination of how much I weigh and whether I feel fat or not. I have this image of how much I should weigh. I've got a figure in my mind that I think is reasonable for me and I either feel good or bad when I'm out getting some exercise. When everything feels right I think to myself "Golly you're fit!" When nothing is right, too fat, too slow, I think "God, this is dreadful".

A fifth of the responses made by the *Perennials* (20.68%) were related to the ability to perform daily tasks without limitation. In each of the cases where this aspect was considered important, the *Perennial* specifically mentioned that 'daily tasks' included activities inherent in an active lifestyle. These comments, once again, were couched in terms of the feelings of well-being associated with regular involvement in exercise.

Fitness is the ability to do just about anything you want to do in everyday life, and this includes being able to do very physical things without adverse stress, so that you can actually enjoy it.

Thirdly, a total of 31.02% of the responses made by the *Perennials* were related to

cardiovascular endurance, strength/muscle tone and optimal weight levels. These comments were made in recognition of the belief that regular involvement in exercise minimizes the effects of a number of risk factors related to morbidity and mortality. These factors appeared to be of increasing importance to three of the *Perennials*. However, once again, they were considered secondary to the contribution to the quality of life made by involvement in exercise and physical fitness.

It's not a case of my feeling I have to run six miles every day or I'll fall behind in fitness. But now at the back of my mind all the time is that not only am I enjoying it but that it's good for me.

The remaining 20.67% of responses made by the *Perennials* were distributed over the perceived relationships between fitness and a healthy lifestyle, and the ability to function better mentally and engage in strenuous exercise. These responses too, were based on the premise that each of these factors promoted positive general feelings. Undoubtedly, the comments which typified the definitions of fitness provided by the *Perennials* illustrated the ethereal nature of the concept, and highlighted its subjectivity.

I think it's really important to be comfortable with your fitness. I think there's a peace of mind or good feelings that come with being adjusted — wherever you're at.

THE ADOPTERS

The definitions of fitness provided by the *Adopters* also identified a number of different dimensions of the concept. However, the focus of the responses made by the *Adopters* was related primarily to extended capabilities. Feelings of well-being were considered relevant to a definition of fitness in only 4.16% of cases. In contrast, almost a third of the responses (29.12%) were related to improved functional capacities, and the resultant ability to perform a variety of tasks without experiencing any discomfort.

I have defined fitness in three ways. First, in terms of weight for my height and my age — that I am not significantly overweight. Second, in terms of my capability, or endurance — to what extent can I exert myself and not suffer negative physical consequences. Third, if you are fit, you are mentally capable, alert and enthusiastic in all aspects of your life.

In addition, a total of 25% of the definitions of fitness provided by the *Adopters* were related specifically to cardiovascular endurance, muscle strength and muscle tone. The frequency with which these dimensions were identified as important was indicative of the concern of these men with physical capacities. A total of 20.83% of responses made by the *Adopters*, more than twice that recorded for any other group, were related to the belief that an optimal body weight was essential for fitness. The importance of this aspect of fitness was obviously one result of the concern with optimal physiological functioning. Seven of the nine *Adopters* stressed the importance of this dimension of fitness.

Fitness, I guess, my biggest concern is always my weight. I have difficulty... Let's put it another way — I'm short for my weight. I'm overweight. I always feel that I'm overweight for what I should be.

Three of the *Adopters* also made comments in relation to the belief that fitness was the ability to perform a wide range of physical tasks, including those associated both with daily life and strenuous exercise, better than the average man. These comments were not reflected in the definitions of fitness provided by any of the other three groups.

Fitness is being able to perform in an optimal way given your age. Physical fitness is a state where you can perform certain physical tasks at a higher level of proficiency than the general population.

In view of the relatively recent involvement of the *Adopters* in regular physical activity, these results were especially interesting. The material presented in Chapter III indicated that the *Adopters* were particularly concerned about health and longevity. In addition, the majority of the group expressed their awareness of the perceived physiological benefits of regular involvement in exercise. Clearly, these issues were foremost in the way in which the *Adopters*, as a group, defined fitness.

THE REJECTORS

The majority of the definitions of fitness provided by the *Rejectors*, almost 80%, fell into two major categories. This was in marked contrast to those provided by the *Perennials* and the *Adopters*, which reflected much greater diversity. More than a third (34.78%) of the definitions provided by the *Rejectors* were related to the ability to complete the tasks of everyday life without being impeded by a lack of physical fitness.

I suppose it is being in a state that allows you to carry out activities without being slowed down by physical condition.

The *Perennials*, qualified similar statements with references to activities associated with an active lifestyle. In contrast, the *Rejectors* appeared to have set more moderate goals.

Not being overweight or underweight I suppose, and having an amount of stamina that is commensurate with one's age. Being in good health, and not getting out of breath going up a flight of stairs.

The majority of responses made by the *Rejectors* (43.47%) were clearly related to a clinical model of health, the most predominant model of health in modern society (Smith, 1983). Within this conceptualization of health, the focal point is the absence of the symptoms or signs of disease or disability.

You need to have whatever heart and lung capacity, or whatever, that would be compatible with health, and I guess by health I mean not getting sick a lot — not dying.

The remaining comments were made in relation to cardiovascular endurance, the desirability of optimal weight, and the ability to be engaged in strenuous exercise. In view of the lack of involvement of the *Rejectors* in physical activity, it was not surprising that feelings of well-being and enhanced mental capability were not associated with fitness, and not reflected in the definitions which were provided.

The definition of physical fitness in relation to minimal criteria may have provided a

means for the *Rejectors* to reduce *cognitive dissonance* (Festinger, 1957). The theory of dissonance is based on the premise that inconsistency in cognitions is psychologically uncomfortable. As a result, individuals experiencing dissonance attempt to reduce the inconsistency through behaviour change, a change in cognitions, or by increasing exposure to new information and opinions. In view of dissonance theory, it is possible that the *Rejectors* internalized definitions of physical fitness which they could meet *despite* their lack of involvement in regular physical activity.

THE RELEGATORS

The dimensions identified as important by the *Relegators* in relation to a definition of fitness were strikingly similar to those emphasized by the *Perennials*. Once again, the feelings of well-being associated with fitness were considered to be of primary importance.

Fitness is feeling good about myself and being able to do a normal day's work and still have sufficient energy to perform any other activities I choose, and emergencies, without undue fatigue or effort.

The history of the *Relegators* involvement in physical activity appeared to be influential in two major areas. Firstly, 25% of the responses made by the *Relegators* were related to the ability to engage in strenuous physical activity. The *Relegators* attached almost four times more significance to this factor than did the only other group to identify it, the *Perennials*. For the *Relegators* this aspect of fitness appeared clearly related to the past.

Physical fitness for me is the way I felt when I was actively refereeing soccer. I could do a ninety minute game, and I'd feel pretty good after it. I'd keep up with the play and, given the fact that I was fifteen years older than the average player, I'd do pretty well.

Secondly, the *Relegators* believed that muscle strength and tone, cardiovascular endurance, and the ability to function without limitation were all important aspects of a definition of fitness. The emphasis on these performance oriented aspects of fitness may have

been a result of their familiarity with these activities. Although no longer involved in any regular exercise, the members of this group were undoubtedly aware of the demands placed on the body by exertion. The *Relegators* were not particularly concerned with their weight or body composition. An optimal weight was considered less important to the definition of fitness provided by the *Relegators* than it was to the definitions of fitness provided the other groups.

SUMMARY

A number of differences were evident between the groups in relation to the ways in which each conceptualized fitness. The *Perennials* placed a great deal of emphasis on the feelings of well-being which they attributed to involvement in exercise. This aspect of fitness was considered less important by the *Adopters*. Reflecting the material presented in Chapter III, the *Adopters* believed that fitness was associated with optimal physiological functioning. The *Relegators* expressed definitions of fitness which resembled those provided by the *Perennials*. Once again, the emphasis was placed on the positive state of mind promoted by regular involvement in exercise. In addition, the *Relegators* believed that the ability to engage in strenuous exercise was a central component of a definition of fitness. Finally, in contrast to the ideas expressed by each of the other three groups, the *Rejectors* regarded fitness as the absence of the symptoms of disease or disability.

MEASURES OF FITNESS AND THEIR EVALUATION

The differences established in relation to both the levels of involvement in regular exercise, and the definitions of fitness provided by the men, directed attention toward the fitness levels of the four different groups identified in the study. There are many aspects of fitness which can be measured. However, body-composition, cardiovascular functioning, muscular endurance and flexibility have been included in the majority of procedures used to estimate fitness (Hebbelinck, 1984). One measure of fitness which examines these aspects of

functioning is the Standardized Test of Fitness (STF) which was developed for use in the Canada Fitness Survey (Canada Fitness Survey, 1983). The fitness test conducted by the university Fitness Unit, with the exception of the measurement of cardiovascular functioning, reflected the testing protocols of the STF (Canada Fitness Survey, 1983). Consequently, the fitness levels of each man who participated in the study were assessed in relation to body-composition, cardiovascular functioning, muscular endurance and flexibility.

Body composition can be regarded as the relationship between lean body mass and fat tissue. The assessment of body composition was based on an evaluation of the body fat of each man, expressed as a percentage of total body weight. Three skinfolds were taken at four body sites: bicep; tricep; subscapular; and suprailiac. The sum of the average skinfold measurements were then compared to established norms in order to estimate the percentage of body fat (Durnin and Wormersley, 1974).

Cardiovascular endurance refers to the combined efficiency of the respiratory system in taking in oxygen, the circulatory system in delivering the oxygen to the muscles, and the utilization of the oxygen by the muscles to produce energy. Cardiovascular endurance is assessed in the STF with the application of a standardized step-test of stamina. However, the Fitness Unit relied on a more sophisticated technique in the measurement of cardiovascular functioning. The test was conducted with a standardized eight minute bicycle ergometer test (Astrand and Rhyning, 1954; Astrand, 1960). Based on heart rate response to a specific workload, a nomogram was used to predict the maximal oxygen consumption ($\text{VO}_2 \text{ max.}$) for each man (Astrand 1960). Results were reported in $\text{ml}^{-1}\text{kg}^{-1}\text{min}^{-1}$.

Muscular endurance can be regarded as the ability of a muscle group to perform repeated contractions over a period of time. Muscular endurance is measured in the STF by assessing the ability of each man to perform push-ups and sit-ups. Each of the men was asked to complete as many push-ups as possible. No time limit was imposed. Each man was then required to complete as many flexed-knee, anchored sit-ups as possible within one minute. For

this study, the final score for each man on muscular endurance resulted from the average of the number of sit-ups and the number of push-ups which were completed.

The fourth and final dimension of fitness to be measured was related to flexibility. Flexibility refers to the range of movement in a joint, or a series of joints. Flexibility is assessed in the STF with the measurement of trunk flexion. A modified Wells and Dillon flexometer was used, and scores were reported in centimetres. Flexibility was measured after each man had spent several minutes stretching.

The height and weight of each man was also recorded. The mean and standard deviation for the age, height and weight for each group are presented in Table 2. It was evident from an examination of Table 2 that the groups did not differ significantly in relation to any of these three dimensions.

Table 2 : Mean and Standard Deviation of Age, Height and Weight for each Group.

	AGE (years)	HEIGHT (cms.)	WEIGHT (kgs.)
PERENNIALS	40.09 (3.45)	179.54 (4.65)	78.32 (7.94)
ADOPTERS	40.33 (3.04)	174.00 (6.48)	76.37 (13.54)
REJECTORS	40.12 (2.56)	176.54 (7.31)	78.96 (15.90)
RELEGATORS	39.57 (4.61)	177.86 (4.81)	71.72 (7.81)
TOTAL	40.07 (3.24)	177.05 (6.12)	76.83 (11.91)

The scores obtained by the men at the fitness test were recorded on a standardized scoresheet (see Appendix 5: *Scoresheet*). These scores were later transferred to a computer file.

Using the SPSSx statistical package, the mean scores obtained by each of the groups, on each of the dimensions assessed were calculated. These are presented in Table 3. A oneway analysis of variance was conducted and the Tukey (hsd) procedure was used to test the significance of differences between group means.

Table 3 : Evaluation of Physical Fitness.

	PERCENTAGE BODY FAT (%)	PREDICTED max VO ₂ (ml ⁻¹ kg ⁻¹ min ⁻¹)	MUSCULAR ENDURANCE (MEAN)	TRUNK FLEXION (cm.)
PERENNIALS	21.91	45.09	27.96	26.17
ADOPTERS	22.74	43.67	31.28	28.78
REJECTORS	25.38	33.27	19.05	29.32
RELEGATORS	22.20	35.43	25.21	20.73
MEAN	23.16	39.55	25.65	26.71

Although the *Rejectors* registered body fat levels higher than the other three groups, differences were not significant. This finding was a little surprising, in view of the research which has indicated that men who lead a sedentary lifestyle tend to have higher levels of body fat than those of their more active peers (Hickey, Mulcahy, Bourke, Graham and Wilson-Davis, 1975). A similar pattern was evident in relation to flexibility. The *Rejectors* recorded measures of trunk flexion in excess of those obtained from the remaining groups. However, differences were not significant.

The *Perennials* obtained the highest values for predicted maximal oxygen uptake. Similar scores were obtained by the *Adopters*. However, both the *Rejectors* and the *Relegators* recorded lower values. The differences between the *Perennials* and the *Rejectors*, and the *Adopters* and the *Rejectors*, were significant ($p < 0.05$).

In view of the reported differences in relation to involvement in regular physical activity, it was not surprising that both of the 'active' groups showed greater muscular endurance. The *Adopters* scored highest, and significantly better than the *Rejectors* ($p < 0.05$). The *Perennials* also recorded scores significantly higher than those of the *Rejectors* ($p < 0.05$).

In general, the fitness levels of the four groups reflected the degree of involvement in physical activity reported in the interviews. Although differences were not evident in relation to flexibility and body composition, levels of predicted maximal oxygen uptake and muscular endurance were significantly higher in the active men. In order to investigate whether the men themselves were aware of these differences, self-assessed levels of fitness were examined.

SELF-ASSESSED FITNESS

There is very little research which has addressed the relationship between actual fitness and self-assessed estimates of fitness. Undoubtedly, one of the major reasons for the existence of this situation is the difficulty associated with measurement. The measurement of self-assessed fitness has been complicated by the same methodological issues that have been associated with the measurement of fitness, and with all self-rating attitudinal scales.

The few studies that have been conducted on individual perceptions of levels of fitness have been based on classification within broad categories. One large study examined the self-assessed levels of fitness of 672 females and 558 males (Bailey, Shephard, Mirwald and McBride, 1974). Participants who completed a bicycle ergometer test to determine cardiorespiratory fitness were asked to rate their fitness as below average, average, or above average. These results were then compared with the corresponding predictions of maximal oxygen uptake. The authors concluded that "the men assessed themselves fairly accurately" (Bailey et al., 1974, p.29). A smaller study concluded that actual levels of fitness were minimally related to self-assessed estimates of fitness (Heaps, 1978). Unfortunately, the

author did not elaborate on the technique employed for the self-assessment of fitness.

In a related field, the self-assessment of health has also received very little attention. The concepts of health and fitness are not synonymous. However, the self-assessment of health has been limited by methodological problems similar to those associated with the self-assessment of fitness. One measure of self-rated health has been used in a number of studies (Linn, Hunter and Linn, 1980; Garrity, Somes and Marx, 1978; Palmore and Luikart, 1972). The method is based on a ten point scale anchored by two extremes. At one end, 0 is associated with the worst health possible. At the other, a score of 9 represents perfect health. This measurement technique was adapted for use in this study to evaluate self-assessed fitness.

As part of the interview, each man was asked to rate various aspects of his physical fitness in relation to other Canadian men of his age (see Appendix 1: *Interview Schedule*). Once again, body composition, cardiorespiratory functioning, muscular endurance, and flexibility were considered. A definition of each of these aspects of fitness was provided. Each man was then required to mark one of ten points on a scale anchored by 'High' and 'Low'.

The scores obtained from the men were later recorded on the standardized scoresheet developed for the study (see Appendix 5: *Scoresheet*) and later transferred to the computer file where all scores were stored. Once again, the SPSSx statistical package, was used to obtain mean scores for each group, on each dimension. These means are presented in Table 4. A oneway analysis of variance was conducted and the Tukey (hsd) procedure was used to test the significance of differences between the group means.

The self-assessed measures of fitness produced patterns similar to those obtained from the measurement of actual fitness. However, there were a number of important differences. There were no differences between the groups in relation to measured levels of body fat. Similarly, each of the groups provided comparable evaluations of their perceptions of body fat. The *Adopters* obtained the lowest score, associated with a perception of a greater level of body

Table 4 : Self-Evaluation of Physical Fitness.

	BODY FAT	MAX. VO ₂	MUSCULAR ENDURANCE	FLEXIBILITY
PERENNIALS	7.00	7.27	6.36	4.60
ADOPTERS	5.67	6.89	6.33	4.55
REJECTORS	5.90	5.09	4.55	4.36
RELEGATORS	7.00	6.43	6.14	5.43
MEAN	6.38	6.39	5.79	4.67

fat, but differences were not significant. Each of the groups rated their flexibility lowest of the various dimensions of fitness. Although the *Relegators* rated themselves the most flexible, differences between the groups were not significant.

The *Perennials*, who obtained the highest predicted values for maximal oxygen uptake, also perceived their cardiorespiratory functioning to be the highest. The *Rejectors* perceived their aerobic capabilities to be the lowest, and the difference between this prediction and that of the *Perennials* was significant ($p < 0.05$). The *Perennials* also provided the highest estimates of muscular endurance. The differences between the predictions of muscular endurance made by the *Perennials* and those made by the *Rejectors* were significant ($p < 0.05$). This reflected the measurements recorded at the fitness tests. Although the *Adopters* recorded levels of fitness comparable to those of the *Perennials*, the self-assessments of fitness made by the *Adopters*, although higher, were not significantly different from those made by the inactive men who participated in the study.

These results indicated that the active men in the study tended to evaluate their fitness more highly than the men who led sedentary lives. An exception to this trend was provided by the *Relegators*, who rated their muscular endurance at the same level as that reported by the

more active men in the study. On the basis of the actual and self-assessed measures of fitness obtained from the men, an examination of the correlation between the two was made.

ACTUAL AND SELF-ASSESSED FITNESS

The SPSSx statistical package was used to calculate Pearson product-moment correlations between the values obtained from the fitness test conducted by the Fitness Unit and the self-assessments of fitness made by the men. Initially, correlations for each of the dimensions of fitness were calculated, based on the group as a whole. A significant relationship was established between measured levels of body fat and perceived levels of body fat ($r=0.51$, $p<0.001$). A similar statistic was obtained as a measure of the relationship between actual muscular endurance and perceived muscular endurance ($r=0.60$, $p<0.001$). Actual levels of predicted maximal oxygen uptake and flexibility could also be used with confidence to predict self-assessed abilities on each of these dimensions ($r=0.40$, $p<0.01$). Finally, the correlation obtained between self-assessed flexibility and actual flexibility was also significant ($r=0.43$, $p<0.01$). As a whole, the results of this study clearly indicated a strong relationship between actual and self-assessed levels of fitness. However, this relationship was also examined within the confines of each group. Although the size of each group was relatively small, a number of tentative conclusions could be drawn. The Pearson product-moment correlations which were obtained as an estimate of the relationship between actual and self-assessed fitness are presented in Table 5. The levels of significance, of each of the correlations, are also included.

These correlations of the relationship between actual and self-assessed fitness can be interpreted in view of a cognitive-physiological interaction theory (Schachter, 1964). This theory clearly reflects the underlying assumptions of the theory of cognitive dissonance (Festinger, 1957). The development cognitive-physiological interaction theory was based on the empirical confirmation of three propositions. Two of these propositions can be considered central to this study. Firstly, it was argued that given a state of physiological arousal for which

Table 5 : Correlations between Actual and Self-Assessed Fitness by Group.

	PERENNIALS	ADOPTERS	REJECTORS	RELEGATORS
Actual Fat	0.60	0.67	0.42	0.10
Perceived Fat	($p < 0.05$)	($p < 0.05$)	N.S.	N.S.
Actual VO ₂	0.23	0.46	-0.45	0.39
Perceived VO ₂	N.S.	N.S.	($p < 0.10$)	N.S.
Actual Mus. ¹	0.06	0.63	0.72	0.80
Perceived Mus. ¹	N.S.	($p < 0.05$)	($p < 0.01$)	($p < 0.05$)
Actual Flex. ²	0.31	0.91	0.24	0.732
Perceived Flex. ²	N.S.	($p < 0.001$)	N.S.	($p < 0.05$)

¹ Muscular Endurance ² Flexibility

an individual has no immediate explanation, the individual will label the state and describe feelings in terms of available cognitions. Secondly, given a state of physiological arousal for which an individual has a completely appropriate explanation, no evaluative needs will arise and it is unlikely that alternative cognitions which are available will be used to 'label' feelings (Schachter, 1964). The author concluded that cognitions about personal levels of physiological functioning develop and change through exposure to either physical or social standards of comparison, and that these cognitions influence psychological behaviour.

These findings were influential in the development of a study which investigated the relative influence of social and physical standards of comparison on the relationship between actual and perceived physical fitness (Heaps, 1978). Fifty-six men completed a test of physical fitness, received experimentally controlled social and physical feedback about their performance, and then completed several self-attitude inventories. The results of the study indicated that the congruence between actual and self-assessed fitness levels was dependent on

the extent to which a man was exposed to information which promoted consistency or inconsistency between actual and perceived fitness levels.

The correlation between the *Perennials*' actual levels of body fat and self-assessed levels of body fat was significant ($p < 0.05$). However, the correlations between empirically measured and self-assessed evaluations of the remaining three dimensions examined, predicted maximal oxygen uptake, muscular endurance, and flexibility, were all relatively weak. The strength of the relationship between actual and self-assessed levels of body-fat suggested that the *Perennials* were more accurate in the perception of their body composition. In view of the cognitive-physiological interaction theory, this finding implied that the *Perennials* were exposed to information which produced an accurate assessment of body composition. The most obvious source of this information is a set of scales.

I watch my weight so that I don't vary too much around a certain point. I vary between 139 and 144 pounds but I wouldn't want to get any thinner or any heavier. I'm happy with my weight at that point.

In contrast, the relative inaccuracy of the *Perennials* in assessing the other dimensions of their fitness suggested that information which they had internalized, in relation to these aspects of fitness, had been less accurate. Although there are many sources which may have produced this information, a primary source may have been self-evaluation itself. The definitions of fitness provided by the *Perennials* and reviewed earlier in this chapter, and the material presented on involvement in exercise in Chapter III, clearly indicated that the *Perennials* attached great importance to the feelings they associated with exercise.

Fitness is feeling comfortable in your body. I suppose in any particular sport it's nice to do it at the level you'd like. I make my estimations of fitness based on how I am playing tennis at any particular time.

The long-term involvement of the *Perennials* in physical activity appeared to be accompanied by minimal interest in the quantification of fitness. The second proposition of the cognitive-physiological interaction theory, identified earlier in this chapter, appeared to clarify

this finding. The *Perennials* had been engaged in regular physical activity for a long time. Consequently, they believed that their levels of fitness were the direct result of their active lifestyles. Faced with an 'appropriate explanation' of their fitness levels, evaluative needs did not arise and alternatives to this belief were not considered. The *Perennials* did not attribute great importance to the empirical measurement of fitness. Their own assessments of fitness were far more important.

I only feel good when I'm in my kind of shape. Fitness is a kind of absolute term that you can measure and I don't think that I would measure up that well under those criteria. I'm in the shape that allows me to continue the lifestyle which I've developed, and enjoy, and feel good about myself.

The *Adopters* appeared to be involved in a different situation. The correlations between actual and perceived body fat, and actual and perceived muscular endurance were both significant ($p < 0.05$). In addition, the relationship between empirically measured and self-assessed flexibility was highly significant ($p < 0.001$). The correlation obtained on the fourth dimension, predicted maximal oxygen uptake, was weaker than the correlations obtained in relation to the other three dimensions of fitness which were assessed. Once again, the cognitive-physiological interaction theory appeared to provide a valuable source of explanation for this situation.

The first element of the theory states that given a state of physiological arousal for which an individual has no immediate explanation, the individual will label the state in terms of available cognitions (Schachter, 1964). The material presented in Chapter III indicated that involvement in physical activity was a recent inclusion in the life of the *Adopters*. Consequently, the conditioning process, and the resultant levels of fitness, may have constituted a situation which could not be interpreted with confidence.

I like to think of myself as being fit, and I can preserve that illusion to a certain point, but I would like to be able to think I suppose, more confidently about it. You sit back with a gut hanging over your belt and you really begin to wonder just how fit you are.

The information presented earlier in this chapter indicated that after many years of inactivity, the renewed interest in exercise shown by the *Adopters* was associated with a definition of fitness which was based, primarily, on physiological functioning. Confronted with a situation in which the *Adopters* were not confident may have resulted in a reliance on the assimilation of salient information. One such source appeared to be an ongoing assessment of performance. The profile of Peter Thompson, presented in Chapter III, clearly demonstrated the quantification of performance with the use of a watch. Once again, the monitoring of weight appeared to be readily accomplished.

I am very conscious of my level of fitness. I have behavioural evidence of it every day. First, I run. And second, I always weigh myself after a shower — I am always careful about what I eat.

Other sources of information also appeared to provide the *Adopters* with constant standards of comparison. Four of the men in this group described their involvement in fitness classes and other activities where direct comparison could be made with the performance of others.¹ The availability of such direct comparison with others may have been responsible for the high degree of accuracy shown by the *Adopters* in the prediction of both their muscular endurance and their flexibility. Activities emphasising each of these aspects of fitness are routinely incorporated in many organized exercise programmes. In addition, books and magazines dealing with various aspects of involvement in exercise were mentioned by three of the *Adopters*, and two of these men subscribed to a popular magazine dealing with running.

Despite the *Adopters'* apparent reliance on measurement, it was evident in some cases that an evaluation on one dimension of physical fitness led to the generalization to others. For example, one *Adopter*, whose body weight was assessed to be 29.3% fat, believed he was overweight. He was correct (Durnin and Wormersley, 1974).

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¹This aspect of involvement in exercise will be examined in detail in the following chapter.

I do feel that I have a few extra pounds around the midsection here I'm fairly conscious of it on a daily basis. I don't go by weight as much as I do by how my body feels. I refuse to step on scales — they're so deceiving. Sometimes I step on and I feel great and I'm heavier than I feel and it makes me too uptight about myself. I can tell where my body is where I want it to be.

Although reluctant to weigh himself, it was evident that the measurement of body weight, and its resultant implications for body composition, produced anxiety for this *Adopter*. Despite frequent involvement in 'intense' racquetball, the estimate he provided of the efficiency of his cardiorespiratory functioning was just above the mean. In contrast, the fitness test produced a prediction of maximal oxygen uptake which was extremely high for a man of his age ($49 \text{ ml} \cdot \text{kg}^{-1} \cdot \text{min}^{-1}$). It is possible that the evaluation of cardiorespiratory functioning provided by this man was a result of the pervasiveness of cognitions related to body composition.

The self-evaluations of fitness made by the *Rejectors*, with one exception, reflected little similarity with the results obtained from the fitness tests. The self-assessments made by the *Rejectors* in relation to their levels of muscular endurance were found to be reliable predictors of performance in the fitness test ($p < 0.05$). This may have been a result of the definitions of the various dimensions of physical fitness provided during the interview. Muscular endurance was specifically defined in relation to the ability to perform activities such as push-ups and sit-ups (see *Interview Schedule: Appendix 1*). In view of the specific nature of this definition, and the fact that the *Rejectors* had not been involved in these activities for many years, it is understandable that their predictions were accurate. The predictions made by the *Rejectors* in relation to their body composition and flexibility were more inaccurate. In addition, a negative correlation was obtained between actual and self-assessed maximal oxygen uptake ($r = -0.45$, $p < 0.10$). These findings may have been influenced by the *Rejectors'* disinterest in involvement in physical activity, and physical fitness itself.

I don't worry about it too much really. I consider myself reasonably fit. Not particularly fit, but I'm not too concerned.

Fitness is not very important at all. It's important to me that I am reasonably

fit but I'm not fighting anything. I'm not fighting excess weight or shortness of breath, so I don't need to concern myself about it.

The cognitive-physiological interaction theory appeared to be applicable to the *Rejectors* for the same reasons it was applicable to the *Perennials*. In view of their stable patterns of inactivity, the *Rejectors* had no need to evaluate their fitness. Their sedentary lifestyles produced unequivocal cognitions related to physical fitness. As illustrated earlier in this chapter, the *Rejectors* defined fitness as the absence of symptoms or signs of disease or disability. Assuming that their levels of functioning satisfied these criteria, the need for an evaluation of fitness would not arise.

I tend to vacillate between smoking and not smoking and being ideal and overweight — or overweight and more overweight. I'm currently on the undesirable end of both.

Although a long-term familiarity with physical activity may have been responsible for the inaccuracy of the *Perennials*, a long-term unfamiliarity with physical activity may have been responsible for the inaccuracy of the beliefs held by the *Rejectors*. Although this situation appeared relatively stable, advancing age was responsible for at least one *Rejector* assessing his fitness levels more closely.

It's important to be physically fit. At my age, I'm beginning to realise that I'm not. But I can't fool myself. I'm a hard person to fool that way — I'm very critical of myself.

The *Relegators*, like the *Adopters*, were faced with an unfamiliar situation. In contrast to the *Adopters*, the *Relegators* had reduced their level of involvement in regular physical activity. Consequently, in an attempt to evaluate a state for which the *Relegators* had no immediate point of reference, they appeared to rely on their fitness levels of the past. A reliance on the past was also clearly illustrated earlier in this chapter when the definitions of fitness provided by the *Relegators* were reviewed.

I think of fitness predominantly in terms of weight and cardiovascular functioning. I know what level of fitness I would like to have, and I know what I was for many years when I was physically active.

The *Relegators* were accurate in the prediction of both their levels of muscular endurance and their levels of flexibility ($p < 0.05$). This may have been the result of their familiarity with each of these dimensions of fitness, based on their past involvement. However, the self-evaluations made by the *Rejectors* in relation to both body composition and predicted maximal oxygen uptake were more inaccurate. The perceptions held by one *Relegator*, in reference to each of these aspects of fitness, were clearly stated.

My children often tease me about having this excess fat, but I figure I'm fitter now than I was at age twenty — both in terms of weight, and probably endurance. You see, I didn't do very much at all when I was younger.

These comments, and those made by another *Relegator*, provided strong support for the argument that although each of the *Relegators* had greatly reduced his involvement in physical activity, cognitions related to his own levels of fitness had not undergone similar modification.

For a period of five or six years my wife and I swam regularly, and certainly my level of fitness when I started was abysmal — I don't think I could swim a length. At my peak, I could swim a mile in under forty minutes, and I figured that was about as far as I was going to go. That was when I was — four years ago — I would have been forty-one. I had a series of injuries and illnesses and I finally just gave it away. I still figure I'm better off than most of my peers.

As indicated by the fitness tests, there is no justification for the belief that a previously active lifestyle will confer lasting physiological benefits on an inactive individual. This finding was supported by research which has shown that previously active men retain lowered risks of coronary heart disease only if they remain physically active (Paffenbarger, Wing and Hyde, 1978). Research based on longitudinal studies has also shown that the rate of decline in weight-adjusted maximal oxygen uptake for habitually active men is half that of the rate associated with sedentary men who remain healthy (Bruce, 1984). Despite the differential rates of decline that have been associated with various aspects of fitness, members of each of the

four groups identified in this study believed that their fitness levels were declining as they got older.

FITNESS AND AGE

Men in each of the four groups identified in this study made a number of comments which indicated they believed that their fitness levels were being adversely affected by their increasing age. Although the statements which were made illustrated this belief in a number of different ways, it was apparent that many reflected different levels of involvement in regular physical activity. Consequently, there appeared to be similarities between the comments made by the members of each of the groups. The *Perennials* appeared to be increasingly aware of the physiological benefits which are commonly attributed to regular involvement in exercise. Although the definitions of fitness provided by these men were focused mainly on subjective feelings of well-being, four *Perennials* indicated that they were becoming more concerned about problems which begin to be associated with men of their age.

I used to do it just for fun and that's still true but now I am more aware I hear stories about guys having heart attacks and things. As you get older you become a lot more conscious of those sorts of things.

The *Adopters* clearly illustrated their concern with physiological functioning. The definitions of fitness which they provided were oriented towards enhancing their capabilities to cope with any activities in which they chose to be involved. In addition, the *Adopters* were the most accurate of the four groups in predicting their levels of fitness. Their recent involvement in regular exercise appeared to be associated, at least in part, with these issues. One *Adopter* clearly expressed these sentiments, and indicated that his involvement in exercise was part of an attempt to minimize the effects of the aging process.

I have become more concerned about my fitness with age. I think it is a natural reaction against the aging of the body. At least in my case I feel the years passing and I want to forestall that for as long as I can.

The *Rejectors* clearly indicated, throughout the study, that they considered involvement in exercise and physical fitness to be of low priority. This attitude was reflected in their reported levels of involvement in exercise, their definitions of fitness, and the actual and self-assessed evaluations of fitness. However, nine of the *Rejectors* clearly indicated that, in the context of increasing age, fitness was becoming more important. Although this situation may have produced an increased awareness of fitness, the awareness appeared to be expressed in a reflection of an internalized definition of fitness. This definition, as indicated earlier in this chapter, focussed on the absence of limiting disability.

Fitness is becoming more important as I get older. I know it's more of a problem as one gets older, but that doesn't necessarily mean I'm doing more. I'm a little more concerned about it simply because I want to stay healthy and physically capable of shovelling the snow and mowing the lawn and so forth.

Finally, the *Relegators* clearly reflected their awareness of the relationship between fitness and advancing age in view of their past involvement in exercise. In the case of the younger men, ambivalence was evident as they contemplated their inactive lifestyles. The definitions of fitness and the results of both the fitness tests and the self-perception of fitness levels indicated a clear reliance on the past. The *Relegators* described an ironical situation. Fitness levels were rarely considered within an active lifestyle. However, their increased age and inactivity had been accompanied by more concern with their levels of fitness.

I'm more concerned, but only in a mental way. I haven't really done much about those concerns. Several years ago I didn't really think about it very much because I was doing enough physical activity to be in pretty good shape, but now I'm getting older and there is the underlying realization that I am getting soft and overweight.

CONCLUSION

The material presented in this chapter focused on the definition of fitness provided by each of the men, their performance on four standardized measures of fitness, their self-assessment of status on the same dimensions of fitness, and the accuracy of their predictions. The results indicated a number of differences between the men. However, in each of the groups several themes were evident.

The definitions of fitness provided by the men highlighted the many different ways in which fitness can be defined. The conceptualizations of fitness clearly reflected both the level and type of involvement in regular physical activity. At one extreme, the *Rejectors*' low levels of involvement were reflected in a definition of fitness which was related to the absence of illness and disability, and the ability to complete the tasks of everyday life without limitation. Definitions of this kind appeared to provide a means to reduce the cognitive dissonance associated with an awareness of a need for physical fitness, and a concurrent awareness of a lack of involvement in regular exercise. At the other, the *Perennials* clearly illustrated a relationship between the feelings of well-being which they associated with their involvement in exercise and their definitions of physical fitness. Fitness defined by physiological functioning, and the ability to engage in activities without restriction, appeared to be of related, but secondary importance. In contrast, the *Adopters*, who had a short history of involvement in exercise, believed that the capability to be involved in any activities, including those of a vigorous nature, was of paramount importance. This belief was also reflected in the emphasis the *Adopters* placed on various aspects of physiological functioning. Finally, the *Relegators* resembled the *Perennials* in their reliance on feelings of well-being to define fitness. However, their emphasis on fitness as the ability to engage in strenuous exercise highlighted the importance of the past as a source of reference.

The standardized measures of fitness adopted for use in the study produced results which were readily interpreted in relation to involvement in activity. Although no differences

were established between the groups in relation to body composition or flexibility, both the *Perennials* and the *Adopters* recorded levels of muscular endurance significantly higher than those of the *Rejectors*. In addition, the exercise levels reported by the members of the different groups were reflected in measurements of predicted maximal oxygen uptake. The *Perennials* and the *Adopters* both scored more highly than the *Rejectors*.

Similar differences were established between the self-assessed ratings of predicted performance on the fitness test. No differences were evident between the group in their estimations of body composition or flexibility. However, the *Perennials* rated their predicted maximal oxygen uptake significantly higher than the ratings obtained from the *Rejectors*. The predictions made by *Perennials* in relation to performance on the measure of muscular endurance, were also higher than those made by the *Rejectors*. Although the self-assessments of fitness made by the *Adopters* tended to be higher than those obtained from the inactive men differences were not significant.

The results of the computation of correlations between the actual and self-assessed measures of fitness produced a number of tentative findings. In view of their concern with physiological functioning, it was not surprising that the *Adopters* were the most accurate of the four groups in predicting their levels of fitness. The *Rejectors* and the *Relegators* were both accurate in their predictions of performance on a measure of muscular endurance. The specific nature of this type of activity may have contributed to this result. The *Relegators* were also accurate in their self-evaluations of flexibility. However, their ratings of their predicted maximal oxygen uptake and of their body composition were minimally related to the distribution of actual scores. This finding suggested that the *Relegators'* reduction of involvement in physical activity may not have been accompanied by a similar modification to beliefs about personal levels of fitness. The *Rejectors* were less accurate in their assessments of three of the dimensions of fitness which were examined. Their unfamiliarity with physical demands beyond those associated with everyday life appeared to be a major influence on this

result. Finally, familiarity with the demands of exercise as a result of regular physical activity may have been responsible for the inaccuracy associated with the predictions of fitness made by the *Perennials*. The reliance of these men on their subjective interpretation of feelings associated with exercise was evident. However, this did not exclude the possibility that beliefs about their levels of fitness would not correspond with the results produced from a fitness test. These tentative findings should be considered in relation to the fact that overall correlations for the sample, on each of the fitness dimensions, were highly significant. More research is required in this area before further conclusions can be drawn.

The attempt to consider the ways in which the men in this study conceptualized 'fitness', and perceived their levels of fitness in relation to their age, resulted in a great deal of additional information related to various other perceptions. In particular, the examination of 'body composition' produced many comments about the perception of general body shape and appearance. Although related to the perception of one dimension of fitness, these comments appeared to be best situated within an examination of identity as a whole.

Chapter V

IDENTITY UNDER REVIEW: PHYSICAL ACTIVITY AT MID-LIFE

It's simply a matter of self-image — how you want to be viewed by other people and how you would like, in all honesty, to view yourself.

INTRODUCTION

The psychological significance of physical activity has rarely been the focus of research related to adult male involvement in exercise. However, the material obtained from the interviews clearly illustrated that involvement in physical activity, for a number of the men who participated in this study, was associated with a variety of psychological processes. Perhaps the most central psychological process is the development and maintenance of a sense of identity. Consequently, the primary objective of this chapter is to examine the ways in which involvement in physical activity may have contributed to the identities of the men who formed the four groups identified in this study.

It was evident in Chapter III that a number of the men had modified their involvement in physical activity within the period several years prior to the interview. The *Relegators* were engaged in addressing issues associated with the establishment of both career and family, and had reduced their involvement in exercise. In contrast, the *Adopters* had recently invested a great deal of time, emotion and enthusiasm in physical activity. The *Perennials*, and the *Rejectors*, did not report changes in their levels of involvement in exercise. However, members of each of these groups described different ways in which the significance of physical activity, and issues related to their involvement in exercise, had changed. In view of these differences, the psychological implications of involvement in physical activity varied greatly between each of the men who were interviewed. The content of this chapter will reflect those differences, and will focus predominantly on the men who were regularly active.

The chapter will be divided into two major sections. The first will contain an examination of two major approaches to the concept of *identity*. The relevance of each of these approaches will then be considered in relation to the research which has suggested that identity is of special significance to men at middle-age. This review will be followed by an elaboration of the way in which *identity* was defined for use in this chapter. The first part of the chapter will also contain an overview of the sociocultural environment in which these men faced the option to exercise. The second part of the chapter will focus, in turn, on each of the four groups that were identified in this study. The primary objective of the examination will be the investigation of the salience of physical activity to identity. In order to achieve this objective, a number of areas will be explored. Firstly, the extent to which involvement in exercise was a part of life, and a part of identity, will be considered. Secondly, the importance of body shape and appearance, and its contribution to identity, will be assessed. This appraisal will be augmented with the results obtained from a measure of satisfaction with body shape and appearance which was included in the study. Finally, the maintenance and modification of identities related to physical activity will be examined in relation to various aspects of exercise involvement.

There can be few tasks as difficult as attempting to represent an identity, or specific aspects of an identity, within the confines of a few short pages. However, it is not a shortage of space which poses the problem. The material presented in this chapter is the result of one approach to represent the psychological significance of physical activity to the identities of a small group of middle-aged men whose patterns of involvement in exercise differed greatly.

IDENTITY AT MID-LIFE

An examination of the influence of involvement in physical activity on the identities of the men who participated in this study must be preceded by an examination of some of the major approaches to the concept of *identity* and the concept of *self*. Despite the existence of a vast body of literature, there is little agreement on the meaning or use of each concept, or on

the relationship between the two. Although many different theorists have utilized a number of perspectives, two major themes are apparent in the literature. The first is evident in relation to an emphasis being placed on the role of society in the development and maintenance of a self-concept. The second major approach has stressed the importance of subjective experience and personal development. Each of these perspectives has relevance to this study. Consequently, research typifying each of the approaches will be reviewed.

THE INTERACTIONIST APPROACH

Identity establishes what and where the person is in social terms. It is not a substitute word for self. Instead, when one has identity he is situated that is, cast in the shape of a social object by the acknowledgement of his participation or membership in social relations. One's identity is established when others place him as a social object by assigning the same words of identity that he appropriates for himself or announces. It is in the coincidence of placements and announcements that identity becomes a meaning of the self.

(Stone, 1962, p.93)

The definition presented above clearly reflects the influence of the symbolic interactionist view of self. The early symbolic interactionists argued that social interaction, and the resultant reactions and perceptions of others, was instrumental in the shaping of the self-concept. Consequently, the self and society were believed to be inseparable, and society was regarded to be a mirror in which an image of the self was reflected (Cooley, 1902). Building on these ideas, it was argued that as a result of taking the role of others toward self, the individual learns to interpret the environment in order to anticipate the reactions of others and react appropriately (Mead, 1934).

The emphasis that the early symbolic interactionists placed on social interaction implied that there can be no objective person to be known, discovered, explored or understood (Gergen, 1982). This assumption was the focal point of later research which more closely examined the contribution made by the individual to the outcome of social interaction. In an

extremely influential piece of work, it was argued that each individual is engaged in a constant process of consciously manipulating the impressions given to others (Goffman, 1959). The result of this continual 'image projection' was considered to be a reliance on social identities to provide the means through which the actions and behaviour of an individual can be interpreted by others. This approach also emphasised the belief that individuals have as many social selves as there are individuals, or groups of people, with whom interaction occurs (James, 1890). In each interaction, the behaviour, or role-playing of the individual is determined by symbols as well as by physical stimuli (Charon, 1979). This variety of interactions can result in multiple and often inconsistent concepts of self (Gergen, 1971). For example, a man may have roles including those of university professor, husband, father, cook and hockey player. Each role is associated with a specific set of social relationships, based on a cluster of related meanings.

The argument that an individual has many different selves led a number of theorists to differentiate between those which could be considered central, and those which could be regarded as peripheral (Allport, 1966). The distinction between the two cannot readily be made (Gergen, 1982). However, it has been argued that while peripheral aspects of self may change and reflect considerable inconsistency, central aspects of self can be expected to remain relatively stable over time (Bem and Allen, 1974).

THE INTRAPERSONAL APPROACH

The perceptual view sees man as a growing, dynamic, creative being continuously in search of adequacy. Instead of an object at the mercy of environment, he is, himself, a purposive agent engaged in a never-ending business of becoming. People in this sense are processes rather than objects, growing rather than static.

(Snygg and Combs, 1949, p.312)

The intrapersonal approach to the concepts of self and identity focusses on the importance of intrapsychic processes. The early theorists who took this approach were strongly

influenced by the work of Freud. From this perspective, it has been argued that the self-concept held by an individual is a highly personalized subjective system through which meaning can be assigned to experience. Consequently, each individual ~~can~~ be regarded as a conscious being, aware of the reasons for behaviour, and capable of organising and guiding actions with full awareness of their implications for personal experience (Adler, 1927).

The active role assigned to each individual in this process has also been described in relation to a formalized, sequential process governed by time and psychological development. The self has been described as the totality of thoughts contained in both the conscious and subconscious mind (Jung, 1933). In view of the complexity associated with the resolution of these two domains, it has been argued that the self-concept could emerge only at middle-age when various components of personality are developed and individuated (Jung, 1933). Building on these ideas, the delineation of a series of specific developmental periods resulted in a focus on the importance of a firm sense of identity (Erikson, 1960). From this perspective, identity was viewed as a continuing process of progressive differentiation. A growing awareness of the inadequacy of an identity was considered to be the precipitating factor in the exploration of new identities, and the onset of the ensuing developmental period.

An emphasis on the importance of intrapersonal processes in the development of self is also reflected in the work of a number of phenomenological self theorists. For the phenomenologist, every individual exists in a phenomenal field that defines reality as it is perceived by the individual. The phenomenal field can be regarded as the totality of experience of which a person is aware at any one time (Snygg and Combs, 1949). Consequently, the phenomenal self includes all parts of the phenomenal field which the individual perceives to be part or characteristic of self. From a slightly different phenomenological perspective, it has been argued that the world is chaotic and the self-concept provides the means through which an individual imposes order on a situation which could otherwise not be interpreted. Thoughts are believed to be organized to form a unified system, based on the reflection of experience, and

values are organized to be consistent with one another (Lecky, 1969).

A classic phenomenological view of self was based on the concept of self-actualization, within a theory of human motivation (Maslow, 1943). A hierarchy of needs, constructed at five levels, were identified. The needs ranged from the satisfaction of basic physiological requirements to the desire for self-fulfilment and the realization of maximum potential. The most influential theorist to approach the concept of self from a phenomenological perspective adopted these ideas for clinical use (Rogers, 1951). As a result, psychotherapeutic techniques were developed to assist people in the achievement of their maximum potential.

THE IMPORTANCE OF BOTH APPROACHES

The interactionist and intrapersonal approaches to the concept of self each have implications for the study of the place of physical activity in the lives of middle-aged men. The material reviewed in relation to the interactionist approach suggested that self and identity are established as the result of a dynamic process involving both the individual and society. In addition, participation in many different social situations was believed to produce a multiplicity of credible selves. These, in turn, could be differentiated based on their proximity to aspects of the self considered most central. In contrast to this viewpoint, theorists advocating an intrapersonal approach to the conceptualization of self and identity have stressed the importance of subjective experience and its contribution to an ongoing process of personal development. Both of these approaches are compatible with current theory related to male adult development. The self and the various aspects of the life structure are regarded as being mutually dependent, and the components chosen for inclusion in the life structure provide the means through which interaction with society can occur (Levinson et al., 1978).

One or two components (rarely as many as three) have a central place in the structure. Others, though important, are more peripheral, and still others are quite marginal or detached from the center. The central components have the greatest significance for the self and for the evolving life course. They receive the largest share of one's time and energy, and they strongly influence the

choices made in other aspects of life. The peripheral components are easier to detach and change; they involve less investment of the self and are less crucial to the fabric of one's life.

(Levinson et al., 1978, p.44)

Changes to various aspects of the life structure and, by implication, to the self-concept, have been considered characteristic of the middle-aged male (Hepworth and Featherstone, 1982; Hultsch and Deutsch, 1981). In addition, the significance of the self-concept to men within this age range has been stressed in relation to processes associated with personal development (Jung, 1933; Erikson, 1960). In particular, modification of the self-concept has been considered a central aspect of the male mid-life transition (Farrell and Rosenberg, 1981; Levinson et al., 1978). The male mid-life transition has been described in many different ways. However, the literature reviewed in Chapter III indicated that despite these differences, there is general agreement that the mid-life transition is based on two primary and interrelated tasks (Levinson et al., 1978). Firstly, the prevailing life structure is examined in relation to the past. Accomplishments, successes, talents, values and failures are reviewed. This process has also been described, without reference to a male mid-life transition, as a primary constituent of an evolving self-concept.

Personal development through the setting of achievement goals — both long and short term — depends largely on one's self-concept. The self-concept, in turn, is a summary of one's evaluations of one's abilities, competencies, successes and failures. In many instances these evaluations are based on the reactions and opinions of other people, the 'reflected appraisals'. But equally important are one's own attempts to assess the adequacy of one's own abilities and self-worth.

(Suls and Mullen, 1982, p.97)

A definition of the self-concept based on a summary of one's evaluations about various aspects of life appears to confound the self-concept with the concept of self-evaluation. Despite a confusion over terminology, there is little doubt that an increasing emphasis on self-evaluation exerts a direct influence on the second task associated with the mid-life transition. With the centre of focus gradually shifting from the past to the future, choices are made in order to modify various aspects of the life structure. The resultant changes may be minimal or

extensive. However, each change reflects an evaluation of the psychological significance of current, or potential, investment in one aspect of the life structure (Levinson et al., 1978). From a symbolic interactionist perspective, the motivation to make these changes is directly linked to the process of identification.

We mean by *identification* appropriation of and commitment to a particular identity or series of identities. As a process, it proceeds by *naming*; its products are ever-evolving self-conceptions — with the emphasis on the *con-*, that is, upon ratification by significant others.

(Foote, 1970, p.484)

IDENTITY DEFINED

The preceding section focussed on traditional approaches to the concept of *identity*, and their relevance to an examination of the identities of a group of middle-aged men. A review of the major contributions to the interactionist approach highlighted the importance of society in the acquisition and modification of a self-concept. In contrast, the intrapersonal conceptualizations of self highlighted the influence of an evolving process of personal development in the formation of identity. Early theorists emphasized the first years of life as being crucial in this process. However, more recent research in this field has been based on the assumption that self and identity are subject to modification throughout life. The view that middle-age is a time when self-concept, self-evaluation and identity are central to life and susceptible to a number of changes was of particular significance to this study.

A consideration of all the material that was reviewed led to the conclusion that self-concept and identity could best be regarded as flexible entities, the products of a dynamic relationship between society and the process of personal development. However, a distinction between *self*, or *self-concept*, and *identity* was not readily apparent. In addition, there appeared to be little clarity associated with the use of *self-evaluation*. In an effort to avoid ambiguity throughout the remainder of this dissertation, it was felt that distinction should be made

between these concepts.

Self and *self-concept* will be regarded as the compilation of *selves* or *subselves* self-perceived and internalized by each of the men. A *subself* can be defined as a set of characteristics, perceived by an individual, to be associated with particular roles, functions and relationships. Discrimination between *subselves* can be made by the individual in relation to the distance from the most highly-valued aspects of self. For example, a 'university professor' subself may be of central importance to the self-concept, whilst a 'gardener' subself may be of less significance. The central focus of this definition is the *subjectivity* associated with the internalization of each of the subselves. A concept allied to, but distinct from, the self-concept is that of *self-evaluation*. Self-evaluation can be regarded as the evaluation of all characteristics, associations and implications of a particular subself.

Identity will be regarded as the compilation of multiple *identities* as perceived by *other individuals*. Identities can be considered as a set of attributes associated with a specific set of social relationships, based on a cluster of related meanings. In this case, the central focus is on the part played by others in observing, reacting and evaluating the identity which is being presented. Obviously, this has clear implications for the maintenance and modification of the self-concept. A particular subself and identity may or may not coincide. A man who regularly donates large sums of money to charity need not necessarily have an identity as a philanthropist. Once again, differentiation may be made between identities based on the perceived centrality of an identity to an individual. The following section will examine the results of an attempt to measure the centrality of a 'physical activity identity' to the identities of the men who comprised the four groups established in this study in relation to involvement in regular physical activity.

THE 'WHO AM I?' TEST

In order to investigate the centrality of physical activity to the identities of middle-aged men, a number of scales developed for use in self-concept research were considered for inclusion in this study. Almost without exception, these scales require an individual to respond within the structured categories of a dimension selected *a priori* by the researcher (McGuire and McGuire, 1982). However, a less structured approach has been advocated.

A researcher using our spontaneous self-concept approach, on the other hand, presents a much lower profile to the respondent, using a relatively low-structured probe (such as "Tell us about yourself") and so obtains information, not only on how the participant would conceptualize the self as falling on some preselected dimension, but also as regards the extent to which the various dimensions are salient when one thinks about the self.

(McGuire and McGuire, 1982, p.72)

The approach recommended above has obvious utility as a means of assessing the extent to which various identities are central to an individual. However, the lack of direction given to interviewees can result in respondents choosing to provide very little information (Burns, 1979). Consequently, a slightly more structured scale was chosen for inclusion in this project.

The *Who Am I?*, or *Twenty-Statements-Test* has been used extensively since its development (Kuhn and McPartland, 1954). The scale requires interviewees to complete the sentence beginning with *I am* twenty times. A number of approaches have been adopted for the interpretation of responses. As a result of the identification of consensual items obtained from the use of the scale, a number of different categories were developed for the classification of responses (Kuhn, 1960). These included social groups and classifications, ideological beliefs, interests, ambitions and self-evaluations. Responses can also be considered in relation to the order in which they are provided, based on the assumption that the most valued aspects of self are reported first. However, a number of authors have suggested that such an assumption may not be valid (McPhail, 1972; Gordon, 1968). Despite the problems associated with the use of the scale, its relatively unstructured format appeared to best provide the means to examine the

salience of physical aspects of identity to identity as a whole.

The *Who Am I?* test was included in this study in order to investigate the frequency with which the men referred to aspects of physical identity, and the rankings to which these responses were assigned. As a result of a small pilot study, the number of statements which each man was required to supply was reduced to fifteen (see Appendix 1: *Interview Schedule*). A failure to complete the scale is a problem commonly associated with its use (Burns, 1979). Although each man who participated in this study provided fifteen responses, some men required more encouragement than others to achieve that goal. The responses obtained from the men were examined and items related to physical aspects of identity were identified. The number of items related to physical aspects of identity, expressed as a percentage of the total responses made by each of the four groups, and the average rank of the items are presented in Table 6.

Table 6 : *Physical Aspects of Identity by Group.*

	% of Total Responses	Mean Ranking
PERENNIALS	21.2	8.37
ADOPTERS	8.88	8.50
REJECTORS	9.09	9.13
RELEGATORS	16.2	7.52
MEAN	13.8	8.38

In view of their regular involvement in physical activity for many years, it was not surprising that 21.2% of the responses obtained from the *Perennials* were related to physical aspects of identity. However, it was surprising that the *Relegators* reported the next highest number, with items related to physical aspects of identity constituting 16.2% of the group total.

This result provided further support for the argument, first presented in Chapter IV, that a modification of cognitions related to physical fitness and physical activity may not necessarily accompany a reduction of involvement in regular exercise. The *Adopters* and the *Rejectors* provided a similar number of responses related to physical aspects of identity, and each provided many fewer than the other two groups. This result appeared to reflect the *Rejectors'* lack of emphasis on physical activity in their lives, and the *Adopters'* relatively recent adoption of a more active lifestyle.

There were no differences established between the four groups in relation to the ranking of responses which were related to physical aspects of identity. The *Who am I?* test was used to initiate the interview, and was introduced to each man as a means of obtaining a relatively brief, personal description. The majority of responses were related to identities in social groups and classifications. In most cases, attention was directed to other areas only when these categories were felt to be exhausted. Consequently, it was apparent that few conclusions could be drawn about the degree of importance associated with various aspects of identity. However, a great deal of qualitative material obtained from the men clearly reflected differences in relation to the centrality of physical aspects of identity to identity as a whole. An examination of this material will be preceded by a consideration of the current sociocultural context in which involvement in regular physical activity can be situated.

THE SOCIOCULTURAL CONTEXT

During the last few years, there has been an enormous and very rapid increase, throughout North America, in the emphasis placed on physical fitness and physical activity. As a result of the multi-dimensional nature of this phenomenon, the magnitude of the increase is difficult to quantify. However, there are numerous indicators which can be readily observed. The number of facilities providing the opportunity to become involved in fitness classes, aerobic dancing, weight training and racquet sports has increased dramatically. Opportunities to

compete in 'fun runs', marathons and triathlons have also increased as eager sponsors have organized more and more events. Unbounded by the distinction between active and inactive individuals, the manufacture, marketing and sales of sports clothing, shoes and accessories has mushroomed into becoming a major part of the economy. Books related to exercise, nutrition and fitness dominate displays in bookstore windows and the circulation of popular magazines like *Runners World* has increased greatly. Television, radio, newspapers and public advertising all contain many references to fitness and exercise and reflect the extent to which they have become a major focus in society. The depth and breadth of this focus has been considered indicative of the 'culture of narcissism' which has become a major theme in North American society (Lasch, 1976). The pervasiveness of countless, stylized images cannot be avoided, and images invite comparison (Hepworth and Featherstone, 1982).

Ours is an age obsessed with youth, health and physical beauty. Television and the dominant visual media churn out persistent reminders that the lithe and graceful body, the dimpled smile set in an attractive face, are the keys to happiness, perhaps even its essence.

(Kern, 1975, p.IX)

The Canadian government has been prominent in its attempts to convince Canadians that fitness is a worthwhile goal. *ParticipAction* has been used to promote a more active lifestyle. The programme has been based on the dissemination of information booklets, the coordination of a national fitness survey, and the use of various media sources for widespread advertising. Despite the equivocality associated with statistics related to involvement in regular exercise in Canada (see Chapter I), the Canadian government, unperturbed, has asserted that 'keeping fit' is now an accepted goal in Canadian society.

Keeping fit has become an accepted goal in our society, something that brings not just personal reward, but also recognition and encouragement from our peers A commitment to physical fitness flows from the personal responsibility that each of us has towards our families and to society.

(Regan, 1981, p.3-4)

It is not possible to enumerate each of the overt and covert endorsements of an active

lifestyle which currently permeate Canadian society. However, in view of the nature of this study, it is important to acknowledge the existence of an environment which fully supported the adoption of an active lifestyle. It is also important to review the major characteristics associated with mid-life, in the process of male adult development.

The middle years of a man's life have been associated with two major tasks; an appraisal of the past, and the modification of the present in order to produce a more fulfilling future. This process is conducted within a period in which men are beginning to perceive decreases in physiological functioning. These concerns are reinforced with a common awareness that hair is thinning, skin is wrinkling, weight is increasing and body shape is changing. A focus on limitation may lead to more concern with death. It is certainly more practical to think of time left to live, rather than time since birth. There is less pressure from family concerns, and career goals are either within grasp, obtained or abandoned. A concern with identity is central to this entire scenario. And at the back of the mind, there is an awareness of the physiological and psychological benefits commonly associated with regular involvement in physical activity. Each of the men who participated in this study responded to this situation in different ways, and many similarities were apparent between the members of each of the four groups which were identified in relation to involvement in physical activity.

THE PERENNIALS

The *Perennials* had been involved in physical activity regularly for many years. Consequently, it was evident from the interviews that exercise was an important part of everyday life, and this situation was not unusual. The *Perennials*' long-term involvement in physical activity appeared to provide them with a unique perspective from which to view society's current emphasis on the desirability of leading an active lifestyle. The *Perennials* were a group of men who had been involved in exercise before the advent of its mass promotion. Although they appeared to be relatively unaffected by the current status of fitness and exercise

in society, several of the men made comments about a noticeable change in the attitude of their peers.

In the last ten years or so there has been a drastic change. Previously, all the people around this department looked at involvement in exercise as a sort of goof-off. But now I think it is recognized that there is an important physical component to peoples' lives. I know that if I walk out of here at lunch time, or at four o'clock, with a sports bag I won't get weird looks or smart comments — but I used to.

Self-Concept

It was obvious that the *Perennials'* long-term involvement in physical activity, and its resultant centrality to their identities, had contributed positively to self-esteem. Self-esteem has been defined as a personal judgement of worthiness that is expressed in the attitudes that an individual holds toward himself (Coopersmith, 1967). Self-esteem can be regarded best as a subjective experience which an individual conveys to others by verbal reports and other overt expressive behaviour. There is very little research which has focussed on the relationship between regular exercise and self-esteem. The little that has been published has focussed on children, and clinical intervention in groups of adults with low self-esteem (Leonardson and Garguilo, 1978; Gary and Guthrie, 1972; Clifford and Clifford, 1972). The results of these studies did indicate that involvement in exercise and self-esteem were positively correlated. However, the generalizability of these findings to adult populations composed of active individuals is limited. The views of the men in this study, in relation to involvement in exercise and self-esteem, were not directly solicited. However, one *Perennial* willingly offered his views on the subject.

You haven't asked me about self-concept, but I think that it is very important. The physically fit person probably has a better self-concept and may therefore have the confidence to do things that he or she may not otherwise do.

The contribution made to self-esteem by involvement in sporting activities was clearly illustrated by a number of the *Perennials*. One of the men, who had been running regularly for

eight years, succinctly summarized his beliefs.

My involvement in exercise is tremendously valuable. It gives me a sense of confidence and competence. It's an area in which I have some skill. I'm not a top runner by any means, but I think I'm relatively good.

One of the *Perennials* provided a graphic illustration of the way in which physical activity provided him with reassurance, when other areas of his life were promoting anxiety and self-doubt. This man was one of two in the study who did not have tenure at the university. He had completed his PhD successfully and had embarked on a promising research career in another department. However, financial restraints in the department had resulted in a tenuous existence, and the promotion he had anticipated had not materialized. When initially interviewed, he was actively seeking employment outside the university. At the age of thirty-eight, he provided a dramatic example of a life in transition.

You have to sit back and say "Well are you good enough or not?" I know that sounds awful to sit down and think it. In the last year I've had a good think about it and said, "Okay, it's not that you're not intelligent enough." A better word might be 'applied'. I'm just not willing to work twenty hours a day any more for nothing. Maybe I should have seen this coming, but I'm a stubborn kind of person.

During this period, as he had been throughout his life, the *Perennial* was engaged in a variety of physical activities, all focussing on team sports. Involvement in exercise provided the means where ability could be evaluated under very different criteria from those employed to assess progress in his career. In the community hockey league for which he played, he was the leading goal scorer, and the player with the greatest number of penalty minutes, for the preceding season.

I guess it's the egotistical component of doing your best. I don't know if that's the right word even — egotistical. It's not anybody else. To do your best at something where you've always done well.

This man typified a group for whom exercise contributed significantly to self and identity because it provided an opportunity to 'do your best at something where you've always done

well'.

Body Shape and Appearance

A great deal of research has been published in relation to the influence of the body on psychological development throughout the early years of life. Much of this research has been conducted by psychoanalysts, and psychoanalytic theory draws heavily on the assumption that feelings specifically related to the body provide the basis of personality development during childhood. Many empirical studies have demonstrated that physical shape and appearance is also of great importance throughout adolescence (Burns, 1979). Despite the large volume of research in these areas, the influence of feelings about body shape and appearance during adulthood has received far less attention.

Although there has been little research conducted in relation to the influence of the body during adulthood, it has been argued that the body remains a central aspect of self throughout life (Allport, 1966). More recently, the importance of physical concerns to adults has been examined by psychoanalysts who have attempted to identify important areas in contemporary clinical theory (Gould, 1982). The focus of this area of research has been related predominantly to pathology and patient-therapist interaction in a clinical situation. However, the importance of thoughts and feelings about body appearance, body functioning and aging, in all adults, has been emphasised (Colarusso and Nemiroff, 1981).

Body shape and appearance were certainly of concern to the *Perennials*. The most dramatic example of the centrality of body shape and appearance to identity came from a *Perennial* who had been hospitalized for the treatment of a serious intestinal disorder.

I had gone into the hospital and they had done a lot of tests and I'd been lying in bed, sort of, incapacitated. I hadn't been allowed to eat anything. One night I decided to find some scales and weigh myself. I jiggled with the scales I couldn't seem to get them right It seemed to show around 150. So I said "Well the scales must be broken." The next day I got on again and they seemed to show about the same and I started to think "Wait a minute, isn't that kind of strange?". You know, that a hospital would have scales that don't work

properly. So I went back to my room, took off all my clothes and I looked in the mirror and said "No, the scales mustn't be functioning — I don't look any different." I think I went back a third day and reweighed myself and finally I realized that I was denying that I had lost thirty pounds. I couldn't see it and it was only firmly implanted on me when finally I went home to get some clothes. First thing I did was I rushed in to try on my jeans and they were *really loose* — I had *really* lost thirty pounds. I was scared, it was terrifying. I'd always prided myself with my body, and it was really jarring how much my body image was so sort of a part of me.

Although these comments were not directly related to involvement in exercise, they clearly illustrated the importance that this man attached to his physical appearance. Each of the remaining *Perennials* also made comments in relation to the pride they took in their appearance. This finding was particularly interesting in view of the fact that the fitness tests indicated that the *Perennials* had the same levels of body fat as the men who comprised the other three groups.

Each man in the study was asked to complete a scale in order to indicate the extent to which he was satisfied with the shape and appearance of his physique (see Appendix 1, *Interview Schedule*). The scale was similar to those employed in the self-assessed measurement of fitness. A ten-point scale, ranging from low to high, was used. The mean score obtained by the *Perennials*, 6.55, was the highest of the four groups. Although significantly higher than the values obtained by the *Rejectors* ($p < 0.05$), differences between the other two groups were not significant.

Four of the *Perennials* were single. One of these men, who had recently become divorced, involuntarily, made a number of comments which reflected the influence of his physical appearance on his self-concept. Although he made comments similar to the other *Perennials* in relation to taking pride in his appearance, his newly acquired marital status appeared to make the issue even more relevant.

I'm quite conscious of whether I feel like I have a pot belly. I like to look decent. It's vanity I guess. I'm becoming more conscious of it as I get older. It's a funny thing too my status being single all of a sudden. I was certainly more conscious of how I looked and everything else. Sort of 'on the

market again'. All of a sudden you're looking in the mirror and you're wondering just how old and tired you really look.

The *Perennials*, as a group, created the impression that the changes in shape and appearance which accompanied the onset of middle-age caused them little concern. The group were obviously aware of these changes, but their involvement in regular physical activity seemed to provide them with any reassurance they may have needed. The *Perennials* appeared to accept the changes in their shape and appearance philosophically.

Although I don't think about my shape and appearance often, I think about it more than my fitness. Spare tyres, protruding belly, a combination of the two. It doesn't really concern me. I know that it's there and it's not too likely to go away. But I have noticed it more — the grey hairs.

Social Comparison

A major source of the modification of identity is the process of evaluation. The *Perennials*, despite their emphasis on the feelings of well-being associated with regular involvement in exercise, also appeared to be concerned with evaluation of their abilities. It is not an easy task to evaluate one's own talents and abilities. A simple solution is to make a comparison with objective standards. However, in most situations, appropriate standards are non-existent (Suls and Mullen, 1982). It has been argued that when objective means of comparison are not available to individuals, they will choose to evaluate their performance in relation to the performance of others (Festinger, 1954). Social comparison refers to the evaluation of abilities based on inferences made about performances relative to other people perceived to be similar (Goethals and Darley, 1977). The Three of the *Perennials* highlighted the significance of comparisons of their physical identities with those of other people. In each case, a favourable comparison was directly related to an explicitly stated or implied increase in positive self-evaluation.

I don't like to look overweight and I like my clothes to fit properly. I think it's

important to like what you see in the mirror — it helps your self-esteem. I like people saying to me "God, you're too young to be a Professor and a Chairman". It's a compliment — and I like compliments.

The process of social comparison with similar others has been considered to be most important during childhood, adolescence and early adulthood (Suls and Mullen, 1982). However, it has been argued that as development continues throughout the life-cycle, a different process is adopted. At around the age of forty, men begin to compare themselves with *dissimilar* others with increasing frequency. It has been argued that an explanation for this behaviour can be found in the research which has suggested that men at mid-life are increasingly aware of the finiteness of both achievement and physical being. In addition, a need for *distinctiveness* can be related to a reappraisal of the past, and the reassurance that accomplishments have not been mundane and redundant or that life has not been wasted on trivialities (Suls and Mullen, 1982).

The *Perennials* reported a number of instances where their involvement in physical activity provided opportunities to make a direct comparison with dissimilar others. In three cases it was apparent that the *Perennials* structured involvement in physical activity to ensure that it would provide the opportunity for comparison with dissimilar others. Scores, as obtained in a game of squash, appeared to contribute an additional reinforcement by providing an 'objective' means of comparison.

It's not bragging to say that I haven't lost a game of squash for just over a year. It's only that the level of competition in this department that is, the people that I play against will book a court to play with me so that they can learn. Sometimes I don't even get that much of a workout but it is forty-five minutes on the court and a bit of ego boosting.

The paradoxical nature of the situation described above is striking. This *Perennial* perceived that other players organised matches with him in order to learn. Not surprisingly, the *Perennial* appeared to be eager and willing to demonstrate his ability and adopt the role of

teacher. However, it was evident that the gratification obtained from teaching a novice was far outweighed by the contribution made to self-esteem which resulted from winning each match. Although matched on ability, another of the *Perennials* used a difference in age to create opportunities for comparisons with dissimilar others.

It really is a personal kind of thing. I feel better, I convince myself that I am and I still am competitive with guys who are in their late teens and early twenties in terms of tennis. I guess that it's sort of an age thing that I've created for myself. I'm forty-five and I like to be competitive against people who are eighteen or twenty or so, and I am, for the most part. I think that's important and I'd like to maintain that situation for as long as possible.

Comparisons with general and specific role models also formed a basis on which to create comparison with dissimilar others. Three of the *Perennials* mentioned the influence of elite sportsmen on their performance in various physical activities. The extent of sports coverage in television and other sources of media, appeared to provide a constant source of images for comparison. Although the effects on self-esteem may have been less dramatic than those associated with more tangible comparisons, effects on enjoyment and motivation were described.

So much of what I do is a mind-game thing. When I'm out running I play small games with myself I do little comparisons and stuff — I tend for example, to use some imagery when I'm running and relate how I'm performing to how somebody is doing in the Olympics, or in a race or something, and by imagining myself to be there I get a little burst of motivation to run a bit faster. It's a mental state, using imagery, that I really enjoy getting into.

Summary

The *Perennials* seemed to be relatively unaffected by the increased promotion of exercise throughout society. However, the 'legitimization' of something they had been doing for many years appeared to be welcome. The *Perennials* clearly demonstrated that regular involvement in physical activity provided them with a sense of confidence and competence. As

a result, it was evident that their 'physical activity self' was a central component of their overall self-concepts and a reliable source of self esteem. Body shape and appearance were very important to the self-concepts of the members of the group, although they appeared to show little concern for the changes occurring as a result of aging. In contrast, the *Perennials* were extremely performance oriented, and appeared to use social comparison in order to gain reassurance that their abilities were not deteriorating. In particular, comparisons with dissimilar others appeared to be the most preferred source of performance evaluation. For the *Perennials*, involvement in physical activity was a highly-valued part of the self-concept, and the evaluation of performance was structured to ensure the preservation of that situation.

THE ADOPTERS

Starting to run was perhaps a re-enactment of more youthful challenges. But more illuminating was the fact that I discovered a sense of integration and harmony through running. For some reason, I felt more whole, more complete, more integrated when not only was I a working professional but I was deeply committed to my personal well-being. The two of those together gave me a sense of well-being and self-worth I don't think I'd ever had previous to that.

The *Adopters* were a group of nine men who had each increased their involvement in physical activity significantly. The reasons why they chose to become more active were extremely complex. However, self-concept and, perhaps more importantly, identity, appeared to be major influences in the initiation and continuation of their involvement. Unlike the *Perennials*, the *Adopters* appeared to be very much aware of social pressure to become more active. Several comments were made which reflected this influence, and one man used almost the same words as those used by the government representative quoted earlier in this chapter.

At this age you see people who are getting overweight and who are not in good shape and you want, I think, to keep in good shape. It's responsibility to my family and to myself that I keep my body in better shape and that's why I've started to do all this exercise.

The *Adopters* appeared to provide an example of effective adult socialization. Although the majority of research conducted in relation to the process of socialization has been based on children, it was evident that the process continues throughout life. It has been argued that the substantive content of socialization differs in important ways at different stages of the life-cycle (Brim, 1968). Different things are learned at different times and places during the life course, and an important shift occurs from a concern with values and motives to a concern with overt behaviour (Brim, 1968). The *Adopters* were certainly concerned with overt behaviour, and it was apparent that involvement in physical activity provided a very important identity. A primary reason for its importance appeared to be the extent to which physical activity had become a primary focus within society. A 'physical activity identity' had been attained as the result of the adoption of a more active lifestyle. In some cases, this identity had replaced those associated with other stylized images.

Stopping smoking means that you have to restructure your image. The image of a smoker is, by and large, the image of somebody that is suave and sophisticated, and that goes in very deep. If that is to change because you are no longer a smoker, then you have to take your self-image and restructure it. From someone who is sophisticated, suave, man about town, man of the world, to something that is different — not necessarily a jock image, but it tends to be in that direction. Fit, athletic, slender, young looking, that sort of thing.

Body Shape and Appearance

Although the *Adopters* appeared to be influenced by the social pressure to lead a more active life, the members of each of the other three groups were subject to the same societal pressures. However, the *Rejectors* and the *Relegators* had not modified their lifestyles in order to include more physical activity. One major difference between these groups appeared to be the different degrees of emphasis placed on physiological functioning. The *Adopters* placed a great deal of emphasis on optimal physiological functioning in the definitions of physical fitness which they provided. In addition, the fitness tests indicated that they were as physically

fit as the *Perennials*. Finally, the *Adopters* were found to be the most accurate of the four groups in predicting their levels of physiological functioning. The emphasis on this aspect of involvement in physical activity strongly suggested that the *Adopters'* decision to become more active may have resulted from a concern with their physical capabilities, and the influences of the aging process. However, a concern with self-concept and identity appeared to be the major catalyst in the focussing of attention on levels of physiological functioning.

A point comes where you've got to define your self-image. As you get older you've either got to say "Well, basically, I'm not a kid any more —I hate physical fitness; I'm just the average middle-aged American. I'm going to watch a lot of television and that's alright; it isn't a problem." The alternative which seems more appealing to me is to say "I'm not going to accept the aging process as inevitable." I don't think it's inevitable, and I would like to arrest the process for as long as I can.

These sentiments are supported by research which has suggested that the effects of aging on physiological functioning are of central significance to the self-concept of a middle-aged man. It has been argued that a primary element of male mid-life development is a normative conflict which exists between wishes to deny the aging process and the acceptance of the loss of a youthful body (Colarusso and Nemiroff, 1981). The result of this conflict may be an investment in 'magical repair', with the use of plastic surgery, cosmetic modification, diet or exercise (Colarusso and Nemiroff, 1981).

Although the *Adopters* had not invested in plastic surgery or other extreme forms of cosmetic modification, it was evident that they were engaged in some attempts at 'magical repair'. Several comments were made which illustrated a belief that the adoption of a more active lifestyle would compensate for years of inactivity, smoking, excess alcohol consumption poor dietary habits and other risk factors considered to be negative influences on personal health (Kavanagh, 1985). Six of the *Adopters* had previously been smokers, all reported a concern with excess weight prior to becoming involved in exercise, and four men reported having cut their consumption of alcohol and caffeine. For the self-concept of the *Adopters*, it

appeared that belief in the rehabilitative effects of exercise was particularly important.

Perhaps because of my age, I have been attempting to atone for some of the sins or mistakes of my past. I have been engaged in an active redemption or rebuilding of my wasted youth.

A specific concern with physiological functioning clearly illustrated the increased monitoring of body function which has been considered characteristic of middle-aged men (Neugarten, 1964). However, it can also be regarded as an expression of general concern with physical aspects of identity. Although levels of physiological functioning do not decrease dramatically during middle-age, there is often a noticeable change in the amount of hair, the tautness of skin, and the amount and distribution of physical proportions (Levinson et al., 1978). A concern with changes of this kind were reflected in the comments made by the *Adopters*. However, the amount of satisfaction with their body shape and appearance, as assessed during the interview, was not significantly less than that of any of the other groups. Despite this finding, it appeared that the presentation of a physical identity which was favourably evaluated by others was of great significance to the *Adopters'* levels of self-esteem. As a result of involvement in exercise, the *Adopters* had changed their physical identities considerably, and appeared eager to have their efforts rewarded in the form of admiration from others.

I look at myself and I think "That's not a fat slob any more." You know, "That person looks acceptable." And you think, "Wouldn't it be it be great if someone could think I was attractive?"

Temporal Comparison

The results of the comparisons between the measured levels of fitness, and the self-assessed measures of fitness indicated that the *Adopters* were the most accurate of the four groups in assessing their fitness. This was not surprising in view of the emphasis which the *Adopters* placed on levels of physiological functioning. However, men who had undergone any

form of fitness assessment within the two year period prior to the interview were excluded from the study. Consequently, the factors resulting in the *Adopters'* accurate assessment of fitness were of particular interest.

In contrast to the *Perennials*, the *Adopters* described setting a number of goals in relation to their physical performance. The profile of Peter Thompson, presented in Chapter III, clearly illustrated a determination to reduce the time that it required to run a certain distance. Other goals included aiming to lose various amounts of weight, exercising more often and being as fit as other people.

I see other people that are fit, and it seems to me that I aspire to be fit like them.

The setting and attainment of goals has important implications for self-concept. Self-esteem has been considered as a combination of the way in which individuals regard present abilities, roles and statuses, and their relationship to aspirations for the future (Wylie, 1974). If an individual is to promote and maintain a favourable opinion of self, then goals which are considered to be within a reasonable range of potential accomplishment must be set (Rosenberg, 1968). Although the setting of goals may be governed by these criteria, it is apparent that the way in which performance is assessed is also of crucial importance. It was evident earlier in this chapter that the *Perennials* used social comparison as a means of performance evaluation. Comparisons with others who are perceived to be similar are considered to be of primary relevance when objective means of comparison are unavailable. Although these comparisons dominate the assessment of performance in the first half of life, it has been argued that comparisons with others who are perceived to be *dissimilar* occur with greater frequency around middle-age (Suls and Mullen, 1982). The reliance of the *Perennials* on comparisons with dissimilar others, in order to assess performance, was clearly illustrated earlier in this chapter. The *Adopters*, in contrast, did not appear to assess their performance in relation to the performance of similar or dissimilar others.

A possible explanation for the existence of this situation can be found in the research which has suggested that preferences for different forms of self-evaluation follow an orderly sequence of stages throughout the life-cycle (Suls and Mullen, 1982). It has been argued that as a man grows older, he may become increasingly discouraged from making social comparisons if they provide negative or dissatisfying information (Suls and Mullen, 1982). The *Adopters'* reluctance to engage in social comparison may have been related to it being perceived as a source of dissatisfying information. The extent of the *Adopters'* concern with physiological functioning may have resulted in the need for accurate assessment in performance. Social comparison may not have fulfilled this need as a result of the many different variables which may influence perceptions of fitness. For example, comparison with another squash player, similar or dissimilar, would necessarily incorporate the influences of skill and experience; aspects of the comparison which would not necessarily be related to fitness. Comparisons with other runners would also be compounded with the intervention of variables including experience and technique efficiency. However, as demonstrated in Chapter IV, the *Adopters* had found a means to accurately assess their performance.

Social comparisons are not the only means with which individuals can assess the adequacy of their abilities. Temporal comparisons can also be used, and the frequency with which temporal comparison are used has been shown to increase as an individual gets older (Suls and Mullen, 1982). An individual may compare present attainments with past performances on similar activities in order to assess improvement or deterioration. In contrast to the *Perennials*, the *Adopters* clearly illustrated the use of temporal comparisons in their assessment of performance. It was described in relation to 'self-competition', and clearly distinguished from competition with others.

Physical fitness is not competition. I don't think it has got anything to do with competition against other people of any kind. However, it's hard to be in any kind of good physical shape without some elements of competing against yourself being there.

The preference for temporal comparisons appeared to be related to the amount of time which the *Adopters* had been involved in exercise. The goal of achieving a 'personal best', reported by Peter Thompson in Chapter III, was in sharp contrast to the goals of an *Adopter* who had only been running for a relatively short period of time. Once again, competing with others was of little significance, but improving performance was based on self-competition.

One thing that I find kind of interesting. I think that I'm building a bit of competition in because I time myself and I've found that I start to feel good — I'm reinforced when I beat my previous time. I run alone. I think it's sort of like reading — one doesn't read in groups, and one doesn't run in groups.

Summary

Involvement in physical activity appeared to be related to the self-concepts and identities of the *Adopters* in a number of different ways. At a time in life when there is a great emphasis on review of the past and modification in view of the future, the *Adopters* chose to become more active. The instability of identity which has been associated with this period in life was evident in the comments made by the *Adopters* in relation to their adoption of a new 'image'. Presumably, given the appropriate circumstances, they may have adopted any one of a number of different 'images'. However, the emphasis on physical activity in contemporary society appeared to be persuasive in their decision to become more active. The *Adopters'* concern with physiological functioning, documented in Chapter IV, appeared to be related to a strong desire to minimize the effects of the aging process, and compensate for the past neglect of their bodies. The assessment of their fitness, in contrast to the means used by the *Perennials*, was based on an evaluation of their performance of physical activities over a period of time. The degree of accuracy associated with this assessment highlighted the extent to which physical awareness and body shape and appearance had become a central aspect of self and a highly-valued identity.

THE REJECTORS

Although involvement in physical activity may promote self-esteem, and contribute positively to identity, it is just one of many different components of the life structure which can serve this function. Consequently, it was not surprising that physical activity had very little significance to the self-concepts and identities of the *Rejectors*. As illustrated in Chapter III, the *Rejectors* were not involved in regular physical activity, and this situation, in most cases, had been stable throughout life. The results of the assessment of fitness indicated that the *Rejectors* were less fit than the men in the other three groups, and accurately assessed their levels of fitness to be lower than those of their peers. However, it appeared that their lack of fitness caused them little concern. Although his criteria for fitness appeared to be minimal, one of the *Rejectors* was concerned about the relationship between fitness and his intellectual capabilities. However, the concern was not great enough to result in the initiation of a more active lifestyle.

My fitness does concern me I suppose — I don't want to drop dead. I feel partly that I am limited in my intellectual and laboratory activities because of my lack of physical ability. I could work more and do the things I want to do if I was stronger — but I don't stay up nights worrying about it.

The *Rejectors* did express concern with their shape and appearance. This concern was perhaps best reflected in the results of the assessment, made during the interview, of satisfaction with body shape and appearance. The mean and standard deviation obtained by each of the the four groups is presented in Table 7. The *Rejectors* reported less satisfaction with the shape and appearance of their bodies than that reported by any of the other three groups, and the difference between the *Perennials* and the *Rejectors* was significant ($p < 0.05$). This finding was particularly interesting in view of the fact that the *Rejectors* were not different to any of the other three groups in relation to their percentages of body fat.

There is a great deal of literature which has focussed on the relationship between

Table 7 : *Satisfaction with Body Shape and Appearance.*

PERENNIALS	6.55 (1.69)
ADOPTERS	6.00 (1.58)
REJECTORS	4.36 (1.29)
RELEGATORS	6.14 (1.46)
TOTAL	5.71 (1.70)

exercise and self-esteem. The majority of this research has been conducted with children and adolescents. However, in general, self-esteem has been shown to be positively correlated with body evaluation, and negatively related to body anxiety (Sonstroem, 1982). Two distinct approaches have been utilized in attempts to explain why different body configurations are associated with different characteristics of personality (Tucker, 1982). Early approaches suggested that differences in temperament were genetically related to body build. However, this argument could not be substantiated with empirical evidence, and attention was directed towards the effects of social learning. This approach has emphasised the role of society in attributing different personality characteristics to different body shapes. Stereotypical associations appear to be established early in life, and persist throughout adulthood (Kirkpatrick and Sanders, 1978). During childhood, and particularly adolescence, a person's height, weight and physical proportions become closely associated with attitudes to himself and feelings of personal adequacy and acceptability. One *Rejector*, who was assessed to be 28% body fat, expressed little satisfaction with his shape and appearance. Middle-age did not appear to present problems he had not already encountered.

I have always had an awareness that I am overweight, and I have been

overweight since I was a kid I was chronically overweight when I got married ten years ago. I'm convinced that being overweight is the result of what you were led to expect as a child. I was the fat kid on the block. That was my place and I knew it.

In contrast, seven of the *Rejectors* expressed an increasing concern with their shape and appearance as a result of recent changes in the distribution of their body weight.

My weight hasn't changed since I was sixteen, but as I get older, I notice that my weight is starting to redistribute itself in a more unattractive way. I was looking at my first driving licence the other day and although my weight was the same as what it is now, my waist is now four inches bigger.

Finally, one of the *Rejectors*, who was very lean, believed that weight gain was an inevitable part of middle-age. Although his weight had remained stable for many years, he was resigned to a belief that his weight would increase in the future.

I don't really have weight problems. I've never had the tendency to put on weight. I'm not looking forward to facing the middle-age spread, but as yet it hasn't hit me.

Summary

Involvement in physical activity made little contribution to the self-concept and identity of the *Rejectors*. However, a concern with body shape and appearance commonly associated with middle-age, and reported in relation to the more active men who participated in this study, was evident. The *Rejectors* expressed less satisfaction with their body shape and appearance than the other men in the study, even though their physiques were not significantly different. Although a concern with weight gain was not predominant, the majority of the group expressed dissatisfaction with the changing distributions of their body weight. The failure of the *Rejectors* to take any overt action to alter their physical status further emphasizes the lack of importance which these men associated with physical aspects of their identity.

THE RELEGATORS

Involvement in physical activity appeared to have little significance in the self-concept and identities of the *Relegators*. The *Relegators*, as discussed in detail in Chapter III, included men who were the youngest in the sample, and others who were the oldest. The younger men reported being influenced by the pressures to consolidate their families and their careers. A result of these demands appeared to be the decision to decrease the amount of exercise in their lives. The corresponding gain in weight appeared to affect the younger men differently. One *Relegator* was not particularly concerned.

I don't really see it as a great concern. I'm more conscious that I have put on a little weight over the past few years, but it is not something that I lose any sleep over.

In contrast, another of the younger men was becoming more concerned about the weight which he had recently gained. The increase was something which he had not previously experienced, and it was evident that he was being faced with resultant changes in the way in which he viewed and evaluated his body.

It's becoming a lot more important to me — old age creeping on. When I was playing football and squash it didn't ever enter my head but now it's becoming more obvious because of the weight changes which I've never experienced in my life before. It's the realization that if I've gained ten pounds since becoming inactive, what's to stop me gaining a lot more and beginning to look like what I perceive to be the average Canadian? Maybe it's my own concept of body image — what I am content and happy with. I do not find the overweight Canadian appealing, and I know that it's not healthy.

The older men were also experiencing weight gain, and changes in their appearance. These changes were also interpreted in different ways. The man who made the comments which are presented below was obviously concerned with his increasing weight. However, his concern with weight gain did not appear to provide the motivation necessary to continue his involvement in regular physical activity. This was in sharp contrast to the involvement in squash, canoeing and soccer which he had initiated and maintained around the age of forty.

I'm usually aware of it in the morning when I get out of the shower and sometimes after lunch when I feel that the paunch is there. For years I used to think "At least I don't have a pot", and if ever it felt a bit slack, at least I could suck it in. But it's getting harder to do that. I have bathroom scales right by the shower and there's a big mirror there I can't ignore it.

Another *Relegator*, at the age of forty-five, provided an interesting perspective on the aging process and the significant changes in appearance with which it is often accompanied. This man was aware of changes in his appearance which he did not particularly appreciate. However, his concern was tempered by a philosophical acceptance of the aging process, and the realization that the passage of time would alleviate the problem.

Greying and balding for most people is not too pleasant — but it doesn't make me want to hide my head under a bucket. Given a few more years, I'm sure I'll be resigned to it and won't even notice.

Summary

The *Relegators*, like the *Rejectors*, showed little indication that involvement in physical activity made any contribution to their self-concept and identity. However, the group members, with the exception of two men, described ways in which changes in physical shape and appearance were of concern. Each of the men who did not appear to be particularly concerned with changes in appearance represented one of the age limits defined for the study. The self-concept of the younger man, in view of the demands to consolidate his career and family, would be expected to be based predominantly in those areas. Consequently, body shape and appearance may be considered to be of little significance. In contrast, the older man, by virtue of his age, could be expected to place little emphasis on issues related to the mid-life transition. Consequently, his identity was also contingent on other areas of life. In both of these cases, and for the remainder of the *Relegators*, physical aspects of self were not central aspects of identity, as they may have been several years prior to the interview.

CONCLUSION

The material presented in this chapter focussed on the relationship between involvement in physical activity and identity. Many different approaches have been taken to define identity and self-concept. However, a review of the work of a number of influential theorists indicated that two major themes could be identified within the literature. The first was related to the way in which society, through interaction with others, is influential in the development and maintenance of self-concept and identity. The second was associated with an emphasis being placed on subjective experience and intrapersonal development as the key determinants of self. Literature reflecting the latter approach has also identified the significance of mid-life as a point at which considerable change in the self-concept and identity of a man can occur.

The contribution made by involvement in physical activity to the identities of adult men has rarely been studied. However, the results of this study indicated that exercise and physical aspects of identity were an extremely important aspect of the identities of the active men who took part in this study. The *Perennials*, who had been active for many years, clearly illustrated that physical activity influenced self-esteem. This appeared to be a result of being able to perform well at something which was highly valued. The *Perennials* also took pride in their body shape and appearance, and positive self-evaluation in this area appeared to reflect their perceptions of themselves as active individuals. Consequently, changes in the shape and appearance of their bodies appeared to cause them little concern. However, the *Perennials* were concerned with their performance, and the majority of the group preferred to evaluate their abilities in relation to the performance of others. This finding suggested that it was extremely important to the *Perennials* to continue to do well at something they had always valued.

The *Adopters*, who had initiated their involvement in physical activity at around the age of forty, also clearly illustrated the importance of physical activity to identity. In contrast to the *Perennials*, the *Adopters* appeared to be extremely conscious of their identity. At a time in life when self-concept can be considered particularly susceptible to change, the *Adopters*

modified their lives in order to include regular involvement in physical activity. One factor which appeared to be influential in this process was the influence placed on physical fitness and physical activity in contemporary society. Although body shape and appearance was important to the *Adopters*, it appeared to be an effect, rather than a cause, of their involvement. The primary motivator for involvement in exercise appeared to come from a desire to arrest or minimize the effects of the aging process. In addition, the *Adopters* appeared to be concerned with their previous lifestyles, and their deleterious effects on their health. The concern of the *Adopters* with physiological functioning was also clearly reflected in Chapter IV. In order to assess their levels of physiological functioning, the *Adopters* placed a great deal of emphasis on monitoring their performance in relation to their past achievements. The entire process of exercise adoption and adherence, for the *Adopters*, appeared to be closely associated with issues of identity.

Although the *Rejectors* and the *Relegators* were not involved in any regular exercise, it was evident that their self-concepts were influenced by evaluations of their appearance. The *Rejectors* recorded the lowest scores in the sample for their satisfaction with body shape and appearance. This finding was particularly interesting in view of the results of the fitness tests which indicated that the groups did not differ in relation to percentages of body fat. Concern with excess body fat may have been reduced for the active men as a result of their awareness of their ability to perform well on other dimensions of fitness. The inactive *Relegators* may have resembled the active men in this regard as a result of changes in cognitions related to physical status not corresponding to changes in the level of involvement in physical activity. The *Relegators* expressed some concern with the effects of aging on shape and appearance. However, the statements made by one of the youngest men in the sample indicated that issues related to shape and appearance, and physical activity in general, were of less significance than those associated with career and familial demands. One of the oldest men in the sample, at the age of forty-five, appeared to have negotiated a period of transition and was content to philosophically accept the changes associated with aging.

This chapter examined one aspect of the psychological significance of physical activity, that of its contribution to identity. Another area in which involvement in physical activity has been accorded psychological significance is that related to coping with stress. The next chapter, Chapter VI, is related to this aspect of involvement in physical activity, and focusses on the views of the men who participated in this study.

Chapter VI

EXERCISE AND STRESS: COPING WITH THE EXISTENTIAL QUESTION

A very important aspect of my involvement is a sense of being able to free my thoughts when I run. I enjoy running as a time to think and sort things out and put things into perspective. Just the sheer pleasure and elation which comes from the involvement and from my performance. I would say that a lot of the mental imagery that I use when I am out there is associated with saying "This is going to help me and I'm going to feel better, work better, and I'll have more energy".

INTRODUCTION

The previous chapter focussed on the contribution made to identity by involvement in physical activity. However, there are a number of other areas of psychological functioning which have been linked to involvement in exercise. One area which has attracted an increasing amount of attention in recent years, from both a psychological and a physiological perspective, is the extent to which exercise aids in coping with stress. In addition, it has been argued that stress is inherent in the developmental processes of middle-age, and is a function of the dialectic of psychological differentiation and integration which characterizes development in adulthood (Medinger and Varghese, 1981).

Middle-age has been viewed as the pinnacle of male adulthood. Maturity, accomplishment, security and diminishing external pressures can contribute to a sense of satisfaction and fulfilment which has not previously been experienced. The male at mid-life has also been described as an individual embroiled in critical personal review, self-doubt, anxiety and depression. The men who participated in this study were not representative of either of these polarities. It was apparent that very few, if any, of the men were experiencing *crisis* in their lives. However, elements of personal review, self-doubt, and anxiety were reflected in the interviews with many of the men whose lives appeared to be in *transition* (see Chapter II).

Consequently, it was evident that the group, as a whole, was experiencing some stress which was specifically related to issues commonly associated with men of their age.

In order to examine the relationship between exercise and stress, each of the men who participated in this study was asked two questions in relation to his perceptions of the relationship between physical activity and stress (see Appendix 1: *Interview Schedule*). The first focussed on the extent to which, if at all, each man believed that physical activity made it easier to cope with everyday problems. The second question was directed towards the extent to which involvement in physical activity was consciously used for this purpose. The answers which were provided to these questions reflected the different patterns of involvement in exercise which were identified in the study. The *Perennials* were convinced that physical activity played an important role in helping them to cope with stress.

I don't know what I would do if I wasn't physically active in terms of alternatives for coping with stress and so on. I think it is essential.

The *Adopters* also reflected their belief that involvement in exercise enabled them to better cope with stress. However, the recent inclusion of regular physical activity in their lives was also evident in the comments which they made.

I never realized any of this stuff about exercise and stress. I used to just keep going back to the classes until the instructor said to me "You're the only person I know that comes in here for psychotherapy". And I looked at her and thought "You know, that's exactly what I've been doing".

The *Rejectors*, in contrast to the two active groups of men identified in the study, saw little justification in the belief that involvement in exercise and the reduction of stress were related.

I would say that I don't have any strong feelings one way or another I don't see any relationship between exercising and stress.

The *Relegators* reflected ambivalence in their perceptions of the relationship. Although they expressed a belief that physical activity contributed to coping with stress, their personal

experience had left them unconvinced.

I believe exercise helps you to cope with stress, but I don't think I could claim that I have ever had any benefit from it.

These findings were supported by research literature which has indicated that involvement in exercise can be a useful means of reducing stress. However, neither the quotations presented above nor the research which has investigated the relationship between exercise and stress have clearly identified mechanisms which may be responsible for this situation. Consequently, this chapter will focus on the utilization of an existential perspective in an attempt to identify psychological processes associated with involvement in exercise which may contribute to the amelioration of stress.

In view of the comments made by the men who participated in this study, the question of whether regular involvement in physical activity does contribute to an ability to cope with stress will not be considered at length in this chapter. However, research which has examined this relationship will be reviewed, and the problems associated with traditional approaches to this area of study will be identified. An existential perspective, based on three different dimensions, will then be used to illustrate the ways in which involvement in physical activity was used by the active men who were identified in this study to cope with stress. Finally, the results obtained from the use of a questionnaire developed in relation to health, stress and coping will be presented. An examination of the concepts of stress and coping will precede a review of literature which has focussed on the relationship between exercise and stress.

STRESS AND COPING

There are few areas of research currently attracting the amount of attention being directed towards the study of stress and coping. During the past thirty years research has been conducted in virtually every academic discipline in an attempt to identify the key aspects of a process which has been implicated in a vast array of physiological and psychological pathology.

Despite the amount of research which has been completed, the concept of stress remains vague and ambiguous and there is no apparent consensus on an acceptable definition (Krohne and Raux, 1982). Although there is a great deal of overlap between the concepts of stress and coping, attempts to delineate the key components of the process have been focussed on three major areas: the individual; the environment; and the interaction between the individual and the environment.

Researchers who have concentrated their attention primarily on the individual have used the biological sciences in the study of the physiological response to stress. The most influential model of stress proposed from this perspective was based on the biochemical changes which occur as a result of exposure to stress (Selye, 1956). The General Adaptation Syndrome was based on three stages which were identified as alarm reaction, resistance and exhaustion (Selye, 1956). The first phase, alarm reaction, results in biochemical changes within the body due to exposure to the source of the stress. The resistance phase will occur if repeated exposure to the source of the stress allows adaptation. Finally, exhaustion occurs when repeated exposure to the source of the stress depletes resources utilized during the adaptation phase. The proposal of this pioneering model of stress inspired a great deal of research and resulted in the identification of the role played by stress in producing increased activity of the sympathetic nervous system and the increased secretion of a number of different hormones (Everly and Rosenfeld, 1980). The positive aspects of this situation have resulted in the differentiation between 'good stress' or *eustress*, and 'bad stress' (Selye, 1980). Whilst *eustress* may be desirable in producing optimum levels of functioning, chronic exposure to high levels of stress has been associated with a variety of acute and chronic illnesses (Zegans, 1982). From this perspective, an awareness of the deleterious effects of stress on health has resulted in a great deal of research which has focussed on the modification of physiological states with the use of biofeedback (Gherman, 1981).

The development of research related to the physiological response of the individual to

stress has been paralleled by a similar development in research which has focussed on the stressful nature of the environment. This research has been based on the assumption that stress cannot be separated from the psychosocial context in which it occurs (Coyne and Holroyd, 1982). Consequently, the primary focus of this approach are aspects of the environment, either events or circumstances, which elicit or require a response from the individual (Dohrenwend and Dohrenwend, 1974).

The classic study in the examination of environmental influences and their relationship to stress resulted in the development of the Social Readjustment Rating Scale (Holmes and Rahe, 1967). The scale was based on the identification of forty-three 'stressful life events' which ranged from 'death of spouse' to 'minor violations of the law'. Results obtained from the initial study indicated that exposure to a variety of 'stressful life events' was associated with an increased probability of the development of subsequent illness (Holmes and Rahe, 1967). Based on these findings, a great deal of research was conducted under the assumption that stressful life events played an important role in the aetiology of a wide range of somatic and psychiatric disorders (Dohrenwend and Dohrenwend, 1980).

Despite the significance of its contribution to the field of stress research, the use of the Social Readjustment Rating Scale has been extensively criticized on both conceptual and methodological grounds (Kasl, 1983; Dohrenwend and Dohrenwend, 1980; Sarason, Johnson and Siegel, 1978; Mechanic, 1974). At the centre of the criticism is the assumption that life events are stressful, irrespective of the desirability of their occurrence (Rabkin and Struening, 1976). For example, a 'change in financial status' may be desirable or undesirable depending on whether it results in increased wealth or increased poverty. This distinction has promoted the view that the subjective perception of the meaning of a life event is far more important than its objective character (Antonovsky, 1974). Consequently, the resultant shift in emphasis from environmental events and circumstances to their subjective interpretation by an individual has resulted in a much closer examination of the process of interaction between the individual and

the environment.

In recent stress research, stress has been conceptualized as a relationship between demands made on an individual, and the power of the individual to deal with them without unreasonable or destructive costs (Coyne and Holroyd, 1982). The importance of the process of interaction has been emphasized in research which has focussed on the adaptational significance of relatively minor stresses and pleasures which characterize everyday life (Lazarus, 1980). The emphasis on the minor stresses inherent in daily life reflects a belief that they may be critical event mediators of the more dramatic stressful life events (Kanner, Coyne, Schaefer and Lazarus, 1981). However, an emphasis on the minor pleasures which are also a part of life reflects both their significance in counteracting the effects of stress, and the current emphasis of stress research on coping skills and coping resources.

There is mounting belief among research and clinical workers that how people cope with stress is even more important to overall morale, social functioning and somatic health than the frequency and severity of the stress episodes themselves.

(Roskies and Lazarus, 1980, p.38)

The vast amount of research which has been directed towards the study of coping processes has been based on the assumption that people are rarely passive in response to changing events and circumstances (Rose and Killien, 1983; Haan, 1982; Adams, 1980). In contrast, it has been argued that people seek to change things if they can, and use cognitive modes of coping when they cannot (Lazarus and DeLongis, 1983). The coping process has been considered to be the combination of the appraisal of potentially stressful situations, and the reliance on appropriate coping responses to successfully resolve such situations (Moos and Billings, 1982). The appraisal of a potentially stressful situation is dependent on an assessment of the circumstances in relation to their implications for well-being, and a consideration of appropriate coping options which are available (Lazarus and Folkman, 1984). Although many different perspectives have been adopted in attempts to identify various mechanisms underlying successful coping, health outcomes are believed to be a product of effective coping rather than

simply a consequence of the presence or the absence of stress (Goldberger and Breznitz, 1982; Holroyd and Lazarus, 1982).

Changes in life circumstances, and the resultant exposure to different stressors, have been regarded as the central influences on the gradual accumulation of coping resources over the life span of an individual (Moos and Billings, 1982). The belief that coping resources accumulate throughout life is based on the assumption that the successful resolution of problems which occur throughout the life course contribute to the ability to cope adequately with subsequent stress. This process is believed to be indicative of the continual acquisition of different coping resources, and the elimination of coping resources which are perceived to be ineffective (McCrae, 1982).

SUMMARY

The foregoing discussion has resulted in the identification of a number of important areas in relation to stress and coping. Firstly, the 'individual' approach to stress has emphasised the biochemical changes which occur as a result of exposure to stress. In addition, this approach to stress research has identified the importance of making a distinction between stress which can produce peak arousal and optimum performance, and excessive stress which can result in tissue damage. Secondly, stress research which has focussed on the environment has identified the significance of various events and circumstances in producing stress. Finally, research which has examined the interaction between individual and environment has focussed on the importance of the subjective interpretation of a potentially stressful situation. In addition, the appraisal of such a situation, and the review of appropriate responses which are available, are considered to be the fundamental elements of the coping process throughout the life course.

EXERCISE AND THE REDUCTION OF STRESS

Regular involvement in physical activity is commonly associated with many physiological and psychological benefits. One perceived benefit of involvement in exercise which has received a great deal of attention in recent years is the increased ability to cope with stress. There is general agreement within the literature that regular exercise is associated with an ability to better cope with stress. This conclusion has been reached from two perspectives. Firstly, recent research has indicated that individuals who are physically fit recover from exposure to psychosocial stress more rapidly than individuals with a lower level of fitness (Keller and Seraganian, 1984; Sinyor, Schwartz, Peronnet, Brisson and Seraganian, 1983; Cox, Evans and Jamieson, 1979). In studies of this kind, fitness is determined in relation to predicted maximal oxygen uptake. Psychosocial stress is induced with the use of speeded mental tasks and parameters such as heart rate, muscle tension, electrodermal response and various biochemical changes are monitored. In addition, a variety of questionnaires are commonly used to assess anxiety over the course of the experiment.

From a different perspective, research related to the psychological effects of regular involvement in physical activity has also resulted in the conclusion that exercise and reduced levels of stress are associated. A major influence in this field has been the research which has indicated that regular exercise is an effective means of reducing elevated levels of anxiety and depression within clinical populations (Joesting, 1981; Ledwidge, 1980; Greist, Klein, Eischen, Faris, Gurman and Morgan, 1979). Studies conducted with middle-aged men involved in physical conditioning programmes have also indicated that a decrease in anxiety and depression accompanies involvement in exercise (Blumenthal, Williams, Needels and Wallace, 1982; Hartung and Farge, 1977; Young and Ismail, 1976). In addition, research studies have consistently indicated that athletes record more 'desirable' mental health profiles than those obtained from non-athletes (Morgan, 1980). Finally, many studies have reported that people participating in regular physical activity express their belief that exercise helps them to cope

with stress as part of a contribution to overall feelings of well-being (George, 1982; Schendel, 1976).

The findings associated with studies adopting each of these perspectives are limited by the same theoretical and methodological issues which are inherent in stress research in general. Experimental studies rely on operationalizations of stress and coping which are not indicative of the context in which these processes are usually subjectively defined and experienced. The majority of empirical studies related to the psychological benefits of involvement in exercise are also limited conceptually and methodologically. A major area of concern in this regard is the widespread use of scales and personality questionnaires which were developed to detect psychopathology. Scales such as the Minnesota Multiphasic Personality Inventory (MMPI) resulted from research with clinical populations, and may yield spurious results when used with the general population (Keller and Seraganian, 1984).

Although there is general agreement within the literature that involvement in regular exercise is associated with the reduction of stress, there is little evidence to support the existence of a causal relationship (Morgan, 1982). However, the results of many theoretical, correlational and experimental studies have produced a great deal of speculation about possible mechanisms underlying the association.

Possible mechanisms for the commonly reported relief of mental stress include an improved oxygen supply to the brain, a sense of control of one's destiny, a reduction of Type-A behaviour, an improvement in sleep habits, a 'conditioning' of the stress-and-strain mechanism through the physical demands of exercise, and cognitive perceptions of the instrumental value of physical activity.

(Shephard, 1983, p.528)

Attempts to explain the association between regular exercise and the ability to cope with stress have been based on the findings of studies which have investigated the physiological and psychological effects of physical activity. Consequently, although the explanations which have been suggested do not reflect a broad theoretical base, they do focus on either physiological or

psychological processes.

At a biochemical level, it has been argued that exercise either reduces the secretion of catecholamines, or results in their more appropriate utilization by the body (Haskell, 1979). Excess catecholamines, released from a sympathetic nervous system overstimulated from chronic exposure to stressful situations, can result in damage to the organs and systems of the body (Selye, 1982). Aerobic training has also been associated with reduced levels of lactate, an exercise metabolite, and research on the biochemistry of anxiety has shown that lactate plays a major role in the production of anxiety symptomatology (Ledwidge, 1980). However, this view has been challenged by authors who have argued that the relationship between lactate and anxiety has been refuted at both a theoretical and experimental level (Morgan, Horstman and Stokes, 1979). A great deal of research has been conducted in recent years which has focussed on the role of chronic physical activity in the production of β -endorphin, a naturally occurring opiate-like substance, which produces effects similar to those obtained with the use of opium derivatives. A number of studies have associated the feelings of euphoria often reported by distance runners with increased levels of β -endorphin (Egger, 1981).

Neuromuscular tension has been associated with emotional tension and experimental studies have shown reduced levels of neuromuscular activity at various body sites following acute, vigorous exercise (DeVries, Wiswell, Bulbulian and Moritani, 1981). An extension of this research over longer periods of time has resulted in the suggestion that the major psychological benefits of physical activity, such as a reduction of anxiety, may result from the role of exercise in maintaining an optimal level of physical arousal (Morgan, 1979). It has also been argued that a development of the capacity for exercise tolerance results in an accompanying increase in the capacity for anxiety tolerance because the somatic manifestations of the two processes are the same (Shephard, 1983). Sound sleep has also been associated with a reduction in anxiety and stress, and involvement in physical activity has been shown to increase both frequency and duration of slow-wave sleep (Ledwidge, 1980).

A number of explanations for the observed association between exercise and an increased ability to cope with stress have also been presented from a psychological perspective. One view is based on the assumption that in view of the dynamic relationship between the body and the mind, a change in physical functioning must be accompanied by a resultant change in psychological functioning (Ledwidge, 1980). Another view is based on the belief that sleeping patterns and body weight, both common stressors, are modified positively by involvement in exercise and result in a reduction of associated stress (George, 1982). A more active role is assigned to the individual in a perspective which has gained a great deal of support in recent years. This approach is based on the role of exercise in providing a means of diversion from the concerns and stressors of everyday life (Bahrke and Morgan, 1981).

A commonly held view used to explain the association between exercise and stress, from a psychological perspective, is based on the assumption that anxiety is reduced through the enhancement of self-esteem and self-confidence (Berger, 1980). This is believed to occur as a result of the sense of achievement, mastery and success that can accompany involvement in exercise and the satisfaction derived from the modification of various physical characteristics. Although this perspective is widely documented, it has not been universally supported. Researchers have argued that whenever exercise, self-esteem and self-confidence are intertwined, positive effects on psychological functioning are negligible (Everly and Rosenfeld, 1981).

The most frequently stated rationale to support the argument that involvement in exercise results in a reduction of stress is based on subjective reports that exercise produces feelings of well-being which include a perceived ability to cope better with stress. These sentiments are reported, almost without exception, by people who are involved in regular physical activity. The importance of this perspective is supported by research which has indicated that the psychological benefits which result from involvement in exercise are not the product of physiological changes themselves, but the result of a belief in the value of exercise

(Heaps, 1978). A belief in the instrumental value of physical activity was clearly reflected in the comments made by the *Perennials* and the *Adopters*.

I think exercise really helps to reduce stress a lot, but I would never have believed it before. I think first of all, by exercising, your endurance is increased and you just don't get tired as easily. Whether you really do become stronger or not, I don't know, but I guess the main thing is that I think you do.

SUMMARY

The material which has been presented in this section has been related to two major issues. Firstly, experimental, correlational and theoretical research which has documented the association between involvement in physical activity and reduced levels of stress was reviewed. Although research in these areas has indicated that there is an association between exercise and stress, conceptual and methodological problems have prevented the establishment of any causal relationship. Despite this deficiency, a number of authors have speculated on possible mechanisms through which physical activity may act to mediate stress. The second part of this section reviewed the physiological and psychological approaches which have been utilized in this endeavour. There is little agreement on the processes which may be central in the reduction of stress through exercise, and contradictory statements have been made in several different areas. This field of study certainly requires a great deal of additional research. Attention to rigorous scientific procedures has been recommended by one of the leading researchers in the field.

While most of this literature suggests that exercise, both acute and chronic, is associated with an improved psychological state, there has been no attempt to identify the *mechanism* underlying such improvement The challenge for future investigators in this area will be to adopt rigorous research designs, and it is suggested that answers to the question of "why exercise promotes affect" will be found at a biochemical and neuropsychological level.

(Morgan, 1980, p.133)

Although there is an obvious need for research of this kind it is also apparent that innovative research adopting quite different approaches is also required. Research in this field

appears to have been constricted by a reliance on studies which have examined the physiological and psychological effects of regular involvement in exercise. Consequently, there is little evidence of the vast amount of research which has been conducted in relation to the aetiology of stress and the utilization of various coping processes. In particular, the identification of characteristics commonly associated with effective coping may provide an alternative perspective from which to evaluate known characteristics of involvement in regular physical activity.

The remainder of this chapter will focus on the material obtained from the men who participated in this study. An existential perspective will be adopted in order to examine how various aspects of involvement in exercise may have contributed to the ability to cope with stress.

EXISTENTIALISM AND EXERCISE

Effective coping can be regarded as a process that reduces the anxiety associated with a situation which is perceived to be stressful. As indicated earlier in this chapter, people are rarely passive in stressful situations and seek to change the situation when they can, and cognitively alter the situation when they cannot (Lazarus and DeLongis, 1983). Although direct physical action may result in the characteristics of a situation being changed, an alteration in the subjective perception of a stressful situation is essential if coping is to be effective. This may be achieved with strategies including pharmacological intervention, relaxation, meditation, biofeedback, behaviour therapy, psychotherapy or one of many other techniques (Dobson, 1982). However, an increasing number of theorists and researchers are directing their attention towards enduring aspects of personality in their attempts to identify the central elements of effective coping.

Whatever happens is given meaning and personal significance by the more or less stable features of personality. The stressful impact of life changes (or even the lack of changes) and their requirements for coping can be understood only

with reference to the features of personality which make them important and salient. Two such personality variables *patterns of commitment* and *beliefs about self and world* are especially worthy of attention because they shape stress and coping over the life course.

(Lazarus and DeLongis, 1983, p.251)

Existential psychology views each individual as a biological, social, and psychological being whose primary task is the search for, and establishment of, meaning. Existential personality theory describes two basic personalities (Kobasa and Maddi, 1977). The *authentic* person consciously uses the psychological needs or functions of symbolization, imagination and judgement, and allows these to influence biological and social experiences. Accepting the past and present, the basic orientation is towards the future and its associated uncertainty. Although this orientation leads to anxiety, it is accepted as a necessary concomitant of a challenging life. In contrast, the *inauthentic* person inhibits the expression of psychological needs and feels constricted within predetermined social roles and biological needs. Amidst feelings of worthlessness and insecurity, the uncertainty of the future is feared. Despite resultant feelings of guilt and regret, self and identity are defined solely in relation to the past and the present.

The research reviewed in Chapter II in relation to male adult development, and the intrapersonal approaches to self and identity which were reviewed in Chapter V, clearly reflect the influence of existentialism. Self-actualization, the exploitation of inherent potentialities, is clearly based on the search for meaning in life (Maslow, 1943; Rogers, 1951). In addition, an emphasis on the process of individuation, and a search for meaningfulness and a sense of distinctiveness in life are indicative of an existential approach (Jung, 1933; Erikson, 1960). Existentialism is also clearly associated with the process of male adult development, and the concept of a period a mid-life transition (Levinson et al., 1978). The life structure is changed in order to allow the expression of aspects of self and identity considered to be important, and the result is a more fulfilling and *meaningful* life.

Existentialism has also been used in attempts to explain the ability of various groups of people to maintain health despite living in extremely stressful environments. It has been argued

that the development of a sense of meaning in life, despite the environment, was influential in the ability of some people to survive concentration camps (Frankl, 1963). More recently, this idea has been developed in a model proposed to explain epidemiological research which has indicated that people can remain healthy despite continual exposure to high levels of stress (Antonovsky, 1979).

The *salutogenic model of health* is based on three central concepts (Antonovsky, 1979). A *stressor* may be regarded as a demand made by the internal or external environment that disturbs homeostasis and requires some kind of adaptive response. The adaptive response is based on the availability of *generalized resistance resources* which may be found in the individual, social or physical environment. The extent to which the life of an individual provides generalized resistance resources is a major determinant of the *sense of coherence*.

The sense of coherence is a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that one's internal and external environments are predictable and that there is a high probability that things will work out as well as can reasonably be expected.

(Antonovsky, 1979, p.123)

The sense of coherence is composed of three different themes (Antonovsky, 1982). The first, *manageability*, refers to the high probability that things will work out as well as can reasonably be expected. An individual with a strong sense of manageability regards events in life as experiences which can be managed and challenges which can be met. At the other end of the scale, a weak sense of manageability results in life being viewed as a series of unfortunate experiences inevitably encountered. The second component of the sense of coherence is *comprehensibility*, and it is related to the way in which events and experiences are perceived to reflect an underlying logic. Comprehensibility refers to the feeling of confidence that both internal and external environments are predictable. The third aspect of the sense of coherence is concerned with the *meaningfulness* of existence. Meaningfulness is associated with the belief that at least some of the problems and demands posed by living are worth the investment of energy, commitment and engagement.

A concept clearly related to the sense of coherence is the concept of *hardiness* (Kobasa, 1982). Hardiness is based on the philosophical and psychological assumption that people can rise to the challenge of stressful life events and turn the experiences into opportunities for personal growth and development. Three existential concepts are also central to hardiness (Kobasa, 1982). *Commitment* is the ability to believe in the truth, importance and interest value of self, identity, and the life structure. It is reflected by involvement in diverse aspects of life, including work, family, interpersonal relationships and social institutions. *Control* refers to the belief that actions can be taken to influence the course of events. People with control seek to explain situations with an emphasis on their own actions and responsibilities, and not solely on those of others. *Challenge* is based on the belief that change, rather than stability, is the normative mode of life. From the perspective of challenge, the requirements of coping with everyday stress can be viewed positively, and not as a threat to security (Kobasa, 1982). Although there are both similarities and differences between commitment, control and challenge, they are considered to be interlocking parts of an overall orientation of stress resistance.

Recent research has been conducted in attempts to operationalize both the sense of coherence and hardiness. Preliminary results, obtained with the use of a questionnaire, have indicated that a high sense of coherence is associated with optimal health (Antonovsky, 1982). Hardiness has been assessed with the use of a number of scales related to commitment, control and challenge, which were validated in previous psychological research. The results of several correlational studies have indicated that high scores on hardiness are associated with a low incidence of illness reports (Kobasa, 1982). Each of the men in this study completed a questionnaire designed to measure the sense of coherence. The results are reported later in this chapter. A battery of questionnaires was not used to assess hardiness.

An examination of the data obtained from the interviews indicated that the component dimensions of sense of coherence and hardiness provided a useful framework with which to

examine the material related to stress which was obtained from the men who participated in this study. However, the similarity between the concepts of the sense of coherence and hardiness, and the component dimensions of both scales, makes distinction between the two difficult. For the purposes of clarity in the following discussion, each of the dimensions of the sense of coherence will be considered synonymous with the corresponding dimension of hardiness.

MEANINGFULNESS AND COMMITMENT

Commitment can be considered as the process through which individual interests become attached to socially organized patterns of behaviour which can be regarded as a vehicle through which the nature and needs of an individual can be expressed (Antonovsky, 1979). Commitments are associated with valued ideals and goals, and are reflected both in current concerns and in the investment of energy and the persistence of effort (Lazarus and DeLongis, 1983). It was evident that both the *Perennials* and the *Adopters* believed that involvement in regular physical activity constituted a worthy investment of time, effort and enthusiasm. This belief resulted in the recognition of distinctive goals and priorities.

I set goals because it gives me an incentive to maintain my training and so on, although I realize all the things that can go wrong and I don't always meet the goals. In that way, I'm also process oriented. That way I always feel that I get something out of it by attending to the process.

The commitment of the *Perennials* to an active lifestyle has been clearly illustrated in preceding chapters. Although a number of mediating factors have been acknowledged in their continued involvement in exercise, the *Perennials'* enjoyment of physical activity appeared to provide the incentive to participate. The benefits associated with their active lifestyles, including a perceived reduction of stress, appeared to be taken for granted.

The reduction of stress is such an obvious positive benefit of my involvement in sport that I don't think about it consciously. I really just do the sport for its own sake — it's a positive benefit that just happens.

It was evident in many of the comments made by the *Perennials*, throughout their interviews, that their commitment to involvement in exercise was never questioned. Their emphasis on feelings of well-being, discussed in Chapters III and IV, were based on a long-term relationship with physical activity which had always been positive. An important part of this relationship, for three of the *Perennials*, was the feeling of euphoria which has been associated with chronic involvement in vigorous physical activity.

It certainly unburdens me of the pressure of stress and I think also the fact that I have never *ever* felt bad after a run or some exercise. Mentally, I always get quite a high.

The *Adopters* appeared to be more conscious of explicit ways in which their involvement in exercise functioned to alleviate stress. The perceived importance of this relationship, for four of the *Adopters* was considered to be an influential factor in their continued commitment to an active lifestyle. A number of the effects of exercise traditionally emphasised in relation to the reduction of stress were mentioned. However, the reduction of stress was most frequently described as part of an overall improvement in feelings of psychological well-being.

I think exercising really helps me, mainly as a form of stress reduction. It also helps me to sleep better and it just seems to give me a general feeling of well-being and alertness.

An important aspect of commitment is the extent to which it is based in a sense of community and an awareness of the importance of interaction with others (Kobasa, 1982). Although limited by a variety of methodological constraints, a number of correlational studies have indicated that people who are part of a social network are less negatively affected by stress, and less likely to succumb to illness (Suls, 1982). The extent to which an individual is committed to, and embedded in, social networks has been considered a crucial generalized resistance resource (Antonovsky, 1979).

I think that the social impact is one of the most important aspects of involvement in physical activity. Not in terms of your success ratio, or being number one, or the hero, or the all-star or anything like that. But as you grow

a little older the social ties that you established at university start to die out. If that was an important part of your lifestyle then you need to look for that, and hockey or baseball or whatever gives you that sort of an opportunity.

Many different reasons have been suggested to account for the importance of social interaction as a means of coping with stress (Suls, 1982; Caplan, 1981; Antonovsky, 1979). The importance of physical activity as a means of providing social interaction was evident from the comments made by both the *Perennials* and the *Adopters*. The *Perennials*, in particular, described their membership in a variety of sporting groups, and a deep sense of commitment was evident.

I play tennis with a collection of guys. There's probably ten or twelve in total that have played tournaments in and around the city for years. It's a fairly strong group. We know each other extremely well and we're competitive as you can get, but we're absolutely good friends. There is a good range of players and graduation of skills so there's always someone available to play.

In contrast, the *Adopters* did not emphasise firm commitments to membership in sporting groups, and this may have been a result of their relatively recent involvement in physical activity. The recent involvement of the *Adopters* in physical activity may have been a source of stress in itself, and interaction with others also involved in exercise may have alleviated this stress in three major ways. Firstly, other people with similar interests can provide a great deal of useful information. The *Adopters*, beginning their involvement in exercise, sought information from others in relation to areas of interest such as the appropriate equipment to buy and use, the sort of exercise programme to adopt, reasonable progress to expect, and various ways to avoid, and recover from, minor injuries. Secondly, other active men provide relevant role models, and the *Adopters*, as described in Chapter V, were motivated to initiate and maintain their involvement in exercise because of the involvement of others. Thirdly, a reduction of anxiety associated with an unfamiliar course of action can be achieved by the observation of others performing the same actions. The commitment of the *Adopters* to regular involvement in physical activity was both initiated and perpetuated by social interaction.

I think it is really important that other people are doing it with me. This is much more intensive physical exercise than I have ever done. Friends are encouraging me to do things and besides, exercise gives you a really good feeling as well.

COMPREHENSIBILITY AND CONTROL

Comprehensibility and control refer to the tendency to believe and act as if personal actions can influence the course of events. The *Perennials* and the *Adopters* both reduced the amount of stress in their lives through controlling the frequency, duration and intensity of their involvement in physical activity. These actions were based on the assumption that exercise did result in the reduction of stress. The importance of a belief in the instrumental value of involvement in physical activity has been discussed a number of times in previous chapters. It has been argued that the psychological benefits which result from involvement in exercise, such as the perception of being better able to cope with stress, are not the product of physiological change, but the result of a commitment to a belief in the value of physical activity.

I know that if I'm down in the morning and I go for a run, I'll have a better feeling when I get back.

Having made the assumption that involvement in exercise produces a reduction of stress, the *Perennials* and the *Adopters* clearly exercised control in order to use physical activity as a means of dissociation from stressful situations. *Dissociation* has been described as a major adaptive process. Over a forty year period, the study of the adaptive processes utilized by three hundred and forty men resulted in the identification of dissociation as the only adaptive mechanism which could be voluntarily invoked (Vaillant, 1977).

I think also that if I get really pissed off or angry I meditate, and that helps, but I also run. If things are really crowding in on me what I will do is just simply close the world off for twenty minutes. I just close the door and tell my secretary "I don't want any calls; I don't want to see anybody". And if I am angry, and running fits into my schedule, by the end of the run I've usually got a better perspective on things. It's not that I think about it when I'm running, it's just that it provides a necessary interruption.

The results of a study which compared three different techniques of tension reduction indicated that acute physical activity, meditation, and quiet rest were equally effective (Bahrke and Morgan, 1981). The authors argued that the effectiveness of these methods of tension reduction may have been dependent on the diversional aspects of such activities. However, the authors did not elaborate on different ways in which the diversion may act to ameliorate stress.

Although the *Perennials* and the *Adopters* clearly indicated that dissociation from a stressful situation resulted in the reduction of stress, it was evident that dissociation functioned in a number of different ways. A major aspect of this process appeared to be the way in which physical activity could be used to minimize the demands made by a psychological stressor. This process is indicative of *suppression*, an adaptive mechanism closely related to dissociation (Vaillant, 1977). Suppression can be regarded as the conscious or semiconscious decision to postpone addressing a conscious impulse or conflict. Of the eighteen adaptive mechanisms identified in the longitudinal study described earlier, suppression was the mechanism most closely associated with successful adaptation (Vaillant, 1977). For each man who reported using dissociation as a means of coping with stress, involvement in physical activity provided the opportunity to enter a different world, and suppress previous concerns.

When you're involved in physical activity or taking part in a game or something like that you tend to forget about the world that you have been living in and enter into a new world where you've left all your problems behind. You come back and you see problems in a different light. If you're physically fit, you're better able to cope with things Sometimes I feel I get more work done after having engaged in physical activity — Other times I feel like I just want to sit back and watch television.

A physical dissociation from a stressful situation was common to the active men who used physical activity to cope with stress. However, the exercise situation itself provided two different environments. Firstly, it provided a time in which to relax, and not think about anything in particular. In this manner it provided a means of psychological dissociation from a stressful situation and resulted in outside distractions, including people, cars and dogs,

gradually fading from consciousness. This process is considered characteristic of long-distance runners. It has been reported that one runner, feeling a twinge in the back of the head at the fifteen kilometre mark of a marathon, finished the race to discover that he had been hit by a .22 calibre bullet (Egger, 1981). Five men who participated in this study, three *Perennials* and two *Adopters* described a reduction in their awareness of environmental characteristics during a run.

Running helps me to relax and relieve stress. I think if you feel better, you're better able to cope with the stress of other activities. I do most of my running by myself and I find it a useful time to think. If I run in the morning it's about what lies ahead for that particular day or whatever. I'll find myself having run across a major intersection — a major road — and I think "I didn't even notice if there was a car coming". Your mind just wanders.

The second environment provided by an involvement in exercise was one in which a conscious effort could be made to address problems which were perceived to be stressful. In contrast to a physical and psychological dissociation from stress, the exercise process was viewed as a physical separation from a stressor which could be used to approach a problem from a different perspective.

When I'm out doing something I feel better, everything seems much clearer. I think about the things that are bothering me and they don't worry me so much. Just intellectually — I feel like things are much clearer.

It was apparent that the *Perennials* and the *Adopters* were aware of the ways in which exercise could be used either as a means of physical and psychological dissociation from a stressor, or for a physical dissociation which resulted in the opportunity to think without distraction. One *Perennial* contrasted the two situations in relation to his running. The exercise of control, in making a conscious decision to pursue a course of action perceived to be beneficial, was evident.

If I want to be on my own, I just go for a run. It enables me either to completely forget everything, or it enables me to think about a problem in solitude — and I find that very useful.

The exercise of control, in making a conscious decision to pursue a course of action perceived to be beneficial, was evident in relation to the use of physical activity, by both the *Perennials* and the *Adopters*, as a means of stress reduction. One *Perennial*, a dedicated runner, succinctly illustrated the relationship between the stress inherent in his life, and his use of running as a coping mechanism.

If I have a real problem, I'll run ten miles. If it's nothing serious, maybe five
— I once found that I was running twelve miles every lunch-time.

MANAGEABILITY AND CHALLENGE

Manageability is associated with the extent to which events and experiences are regarded as challenges. The importance of challenge as a central aspect of effective coping is based on the belief that dealing with the challenges posed by life results in psychosocial change and development. The literature reviewed in Chapter II indicated that developmental psychology is based on the premise that life is composed of an endless series of challenges. An integral part of this process is the stress associated with dealing with various aspects of life. Obviously, some situations and circumstances are more challenging than others, and the subjective experience of stress varies greatly between individuals. Life is inevitably stressful, and an equilibrium exists between *eustress* and *distress* (Selye, 1982). Although *eustress* is associated with optimum arousal and functioning, *distress* results from demands and challenges which are perceived to be excessive. The proposal of a model of *flow* has provided a lucid interpretation of this dynamic situation (Csikszentmihalyi, 1977).

The model is based on the axiom that, at any given time, people are aware of a number of opportunities which challenge them to act. Concurrently, they are also aware of their capacity to cope with the challenge posed by the environment. When a person is deluged with demands which are perceived to be in excess of this capacity, a state of anxiety results. If the

demands for action are fewer, but still perceived to be in excess of available resources, worry results. *Flow* is experienced when people perceive the challenges of life to be commensurate with their capabilities. Boredom is associated with an awareness that capabilities and resources exceed the demands of the environment. Finally, a large discrepancy between resources and opportunities for their use also produces a state of anxiety. Flow situations have primarily been associated with structured activities including games, artistic performances and occupations. However, *microflow* activities have been described as the sources of enjoyment which are experienced in the course of daily life (Csikszentmihalyi, 1977).

Although identified as 'uplifts' microflow activities have been described as the minor events which contribute to the reduction of the stress associated with everyday life (Lazarus and DeLongis, 1983). In an attempt to examine sources of the relatively minor stressors and pleasures that characterize every day, 117 stressors and 135 pleasures were identified (Kanner et al., 1981). The relative significance of these characteristics to people of different ages were then assessed. The ten stressors most frequently identified by middle-aged people were related to financial concerns: rising prices; property; investment; and taxes. However, the stressor ranked above all others was 'concerns about weight'. 'Physical appearance' was ranked tenth on the list. The pleasures most commonly reported were associated with good health. The frequency with which 'feeling healthy', and 'getting enough sleep' was emphasised resulted in each response being included in a list of the top five responses (Kanner et al., 1981).

These results were obtained from a group which contained men and women of similar numbers, and the average age of the group was higher than that of the men who participated in this study. However, it was evident that both the *Perennials* and the *Adopters* regarded their involvement in physical activity to be an enjoyable part of daily life. Although it provided a welcome break from constant demands, it was also important in reducing levels of stress.

Exercise is a major facilitator of dealing with the problems and hurdles of everyday life. One, I think I am mentally more alert. I can concentrate for longer periods of time and as a consequence I am more enthusiastic about my

work. I think that, in addition, it provides a break from a long day's grind. Third, I guess that there is a strange a kind of quiet calm that comes with running that gives me a perspective on problems and pressures. It's a fatigue, but one that you don't fight. I can be pretty highly strung and I really find that the act of running washes that out.

Three of the *Adopters* described the way in which exercise functioned to reduce tension. In each case, the comments were qualified with an emphasis on the accumulation of tension as an integral part of daily life. The importance of exercise as a means of coping with the stress associated with a particular problem was discussed with relation to *control*. In contrast, the focus of exercise as a means of reducing daily stress was nonspecific.

I can add to the other things I've said by saying that I feel more relaxed — more comfortable in myself after a real good workout. It blows out some of the stress and tension in the body — you know, the daily stuff — and I'm conscious of it all the time.

In Chapter III it was clearly illustrated that involvement in physical activity was a central aspect of the lives of the *Perennials*. The extent to which exercise was integrated in their lives was also highlighted in relation to the reduction of stress. As an opportunity to do something enjoyable, the exercise process provided a break from the challenges of a routine schedule, and the result was a different perspective on previous demands.

I usually go for a jog and some exercise afterwards and then a nice refreshing shower and you have a much better mental attitude about life. If you have a particularly difficult problem, often, when you return, the problem no longer appears to be quite so serious. I am conscious of it frequently.

Although physical activity appeared to provide a means for coping with the challenges posed by everyday life, the material presented in Chapter V clearly indicated exercise could also be a source of challenge itself. The ability to meet this challenge successfully resulted in an improved sense of both confidence and competence. These feelings, obtained from a performance perceived to be satisfying, influenced other areas of life. For three of the *Adopters*, the amount of perceived stress was one such area.

Exercise contributes enormously to me coping. Absolutely. I think it takes the edge off my frustration level by creating a little honest fatigue and by giving me a sense of well-being. Okay, I might have a problem in some area but I've already done my athletic thing or whatever it is for the day, and I actually did well at it — why worry so much about that other thing.

SUMMARY

An expression of the three dimensions of the sense of coherence and the concept of hardiness have been considered indicative of effective coping strategies. The men who participated in this study illustrated a number of ways in which these dimensions were expressed in their involvement in physical activity, and the resultant effects on levels of stress. The *Perennials* and the *Adopters* were committed both to an involvement in regular exercise and to the belief that physical activity provided a useful means of reducing stress. Their commitments were expressed in relation to goals, values, and relationships with other men with whom they exercised. Based on the assumption that involvement in exercise did produce a reduction of stress, the men managed their physical activity accordingly. Dissociation from the source of the stress provided an opportunity to leave the problem behind, or work towards the solution of the problem within an environment unrelated to the source of the stress. Finally, involvement in physical activity appeared to play an important role in maintaining the dynamic equilibrium between the challenges of the environment, and the ability to cope with the resultant stress. Exercise provided a pleasurable break in a challenging, but inevitably stressful life. Physical activity was one aspect of life which was invested with a great deal of *meaning*.

Physical activity is very important in helping me to cope with stress. It makes everything else I do more fun, more enjoyable, more satisfying and less frustrating. And that includes work — everything.

SENSE OF COHERENCE

The content of the questionnaire developed to measure the *sense of coherence*, is based on the belief that a particular style of orientation to life is an important influence in coping with stress and determining health status (Antonovsky, 1979; Antonovsky, 1982). Initial studies have clearly indicated that a strong sense of coherence is associated with good health, and a low sense of coherence is associated with poor health (Antonovsky, 1982; Payne, 1982).

Those whom we had classified as having a strong 'sense of coherence' did not see the entire world as comprehensible and manageable. What they did was set boundaries: what went on outside these, whether comprehensible and manageable or not, simply didn't really matter much, even if it touched their lives objectively. What was important was what went on within the boundaries. For one person, the scope was very wide; for another, relatively narrow. But once set, what was included was what mattered, was important, was worthy of investment.

(Antonovsky, 1982, p.4)

Each man who was interviewed in the study agreed to complete the same questionnaire, developed to measure the sense of coherence (Antonovsky, 1982). A copy of the scale is attached (see Appendix 2: *Orientation to Life*). Scores obtained for the sense of coherence and each of the component dimensions were recorded in a computer file for subsequent analysis. In order to investigate the relationship between involvement in physical activity and the sense of coherence, the analysis of scores was based on the four groups of men identified in the study in relation to involvement in regular exercise. The mean scores obtained from each of the groups and those obtained from the sample as a whole on the sense of coherence and each of its component dimensions, are presented in Table 8.

It was evident from an examination of the means presented in Table 8 that the scores obtained by each of the groups in relation to the *sense of coherence* as a whole, and each of its three component dimensions, were remarkably similar. This finding indicated that the men in each of the four groups were equally adept in coping with stress, and involvement in physical activity did not confer any special benefits in this regard. However, this result did not negate

Table 8 : Sense of Coherence by Group.

	MEAN ¹	COMP ²	MAN ³	SOC ⁴
PERENNIALS	43.54	53.91	51.45	148.00
ADOPTERS	46.33	51.11	51.55	149.00
REJECTORS	45.73	50.63	51.73	148.01
RELEGATORS	46.71	51.57	51.27	148.14
MEAN	45.42	51.86	51.52	148.29

¹ Meaningfulness² Comprehensibility³ Manageability⁴ Sense of Coherence

the possibility that regular involvement in physical activity can contribute to the development and maintenance of the sense of coherence.

There are many ways in which regular involvement in physical activity may contribute to the formation of *generalized resistance resources* (GRR). These resources can be physical, biochemical, artifactual-material, cognitive, emotional, valiative-attitudinal, interpersonal-relational or macrosociocultural characteristics of the internal or external environment which contribute to the reduction of stress (Antonovsky, 1979).

The potential utility of involvement in physical activity as a means of providing physical and biochemical GRR is evident in the research which has examined the role of exercise in promoting physiological and psychological benefits. Artifactual-material GRR are based predominantly on the access to money, and the ways in which it can be used. There is little doubt that money is an important influence on involvement in physical activity. This is clearly demonstrated in the repeated observation that involvement in regular exercise is predominantly confined to the middle and upper classes of society (Canada Fitness Survey,

1983). Consequently, the possession of money can provide the opportunity to engage in regular physical activity, and gain access to potential means of reducing stress.

Cognitive GRR are related predominantly to knowledge (Antonovsky, 1979). The *Perennials* and the *Adopters* both clearly indicated their belief that involvement in physical activity provided a number of physiological and psychological benefits. The men in each of these groups were committed to the belief that these effects aided in the reduction of stress. Emotional GRR are based predominantly in the many aspects of identity (Antonovsky, 1979). The material presented in Chapter V, clearly demonstrated the extent to which involvement in physical activity can contribute to self-concept and identity.

The role of valiative-attitudinal GRR in the reduction of stress is premised on the assumption that rationality, flexibility and farsightedness are elements of every coping strategy (Antonovsky, 1979). The *Perennials* and the *Adopters* clearly illustrated the way in which they valued involvement in exercise as a means of coping with stress. The decision to dissociate from a stressor appeared to be based on a rationalization that involvement in exercise would provide the means necessary to deal with the stressor more effectively in the future. The role of interaction with others in promoting an interpersonal-relational GRR has been identified as a crucial resource for coping with stress (Antonovsky, 1979). The *Perennials* clearly illustrated their commitment to groups based on their involvement in physical activities and participation in these groups was highly valued by a number of the men. Finally, macrosociocultural GRR are found in many dimensions of culture which provide an extraordinarily wide range of answers to demands (Antonovsky, 1979). In present North American society, there can be little doubt that physical activity is advocated as a panacea for a wide variety of physiological and psychological stressors.

Despite recognition of the ways in which physical activity can contribute to the development of GRR, the men who participated in this study, who differed greatly in relation to their levels of involvement in regular physical activity, did not differ in relation to

measurement of the *sense of coherence*. However, involvement in physical activity is just one component of life, and there are a vast number of life pursuits which, theoretically, can also contribute to the development of GRR, and the ability to cope with stress.

CONCLUSION

This chapter has focussed on the relationship between involvement in physical activity and the reduction of stress. Stress has been conceptualized from three major perspectives. Initial approaches to the study of stress resulted in the identification a variety of biochemical changes which accompany exposure to a stressor. The importance of the environment as a source of stress was emphasised with the publication of findings indicating that a wide range of stressful life events were implicated in the incidence of a variety of physiological and psychological pathology. More recently, a great deal of research has been directed towards the importance of the subjective appraisal of a stressor, and the process of coping has emerged as the major area of stress research.

The relationship between regular involvement in exercise and stress has also been approached from a number of perspectives. The general assumption is made, both in academic and popular publications, that exercise is an effective means of reducing stress. From a physiological perspective, research has shown that individuals who are physically fit are less reactive to stress, and recover more quickly than unfit people after exposure to psychosocial stress. Research from a psychological perspective has indicated that regular exercise is an effective therapeutic technique in reducing elevated levels of anxiety and depression within clinical populations. Changes in psychological profiles, considered to be desirable, have also been established in men regularly involved in a physical conditioning programme. In addition, athletes have been consistently shown to have 'better' psychological profiles than members of the general population. Despite a number of serious conceptual and methodological problems which are associated with this field of research, researchers have assumed that there is an

association between exercise and stress, and have speculated on possible underlying mechanisms. Although these have included a variety of psychological processes, recent research has placed an increasing emphasis on the role of biochemical substrates.

The men who participated in this study reacted differently to the suggestion that involvement in physical activity could play a role in the reduction of stress. The *Perennials* and the *Adopters*, who were both involved in regular physical activity, believed that exercise was important as a means of coping with stress. In contrast, the *Rejectors* and the *Relegators*, who were not involved in exercise, did not see such a relationship. In view of this finding, the material obtained from the *Perennials* and the *Adopters* was examined in order to investigate psychological processes which may have accounted for their beliefs.

The review of material which identified a number of ways in which an association between exercise and stress may be explained showed little evidence of the general body of stress research. However, in an attempt to examine how exercise may function to alleviate stress, it was apparent that research related to coping was crucially relevant. In recent years, stress research has reflected an increased emphasis on stable aspects of personality, and their association with effective coping. Two concepts which have been identified in recent years, and associated with stress, effective coping and health, have emanated from an existential perspective. Neither of these concepts have previously been examined in relation to involvement in physical activity, but they appear to provide an excellent framework with which to examine the way in which regular exercise may contribute to the amelioration of stress. The *sense of coherence* and *hardiness* are both based on three similar, existential concepts. The material obtained from the *Perennials* and the *Adopters* clearly indicated a number of ways in which involvement in physical activity enabled them to cope with stress through the expression of commitment, control and challenge.

Each of the active men were committed to the belief that involvement in exercise was a worthwhile investment of time, energy and effort. This was reflected in its centrality in their

lives, and the many ways in which their involvement was valued have been described in previous chapters. The *Perennials* and the *Adopters* controlled their involvement in exercise as a means of coping with stress. Physical activity was consciously used to dissociate from a stressful environment and either suppress the demands of a problem, or consider the problem in solitude. Finally, exercise provided a welcome break from the demands and challenges of everyday life. Although life can be considered to be inevitably stressful, the positive feelings obtained from involvement in physical activity appeared to make a valuable contribution to the maintenance of the equilibrium between stress and coping.

The scores obtained from the men on a questionnaire designed to measure the sense of coherence highlighted the fact that involvement in physical activity is just one aspect of life which can contribute to *generalized resistance resources*, the *sense of coherence*, and the accumulation of effective coping strategies. The contribution of involvement in regular exercise to the development and maintenance of a *sense of coherence*, and as a means for the expression of commitment, control and challenge, has important implications for professionals working for the promotion of physical activity.

The following chapter will focus on four men who participated in the study who passionately expressed commitment, control and challenge through their involvement in physical activity. Each of the men was a *serious runner* and provided a *graphic example of the extent to which involvement in regular physical activity can become a central focus in life*.

Chapter VII

THE SERIOUS RUNNER

There are several all-encompassing categories for divorce; irreconcilable differences, incompatibility, infidelity and cruel and inhumane treatment. Any one of them will get you a place in the middle of the bed by yourself with no contest. Living with a runner who cannot run, however, is in a class all by itself. Runners, generally, don't hurt anybody. Oh sure, they wear little gym shoes to everything from brunches to black-tie affairs. They sweat all over the sheepskin seat covers in the car. They hold up every meal until they've stretched, run or destretched. And they'll unveil their purple toes, blisters and stress fractures at the drop of a split time. But they're reasonably pleasant. Until they come up with an injury. A couple of weeks ago, I said to my incapacitated husband "Good morning." "Easy for you say", he said. "You're out of shape anyway." "There's no need to be insulting", I said. "I'm sorry you can't run". "Do you know how long it's going to take me to get back up to 15 kilometres a day? It's going to take me three months. Three months of running with pain, gasping and sweating with leg cramps and sore muscles". "That's not the worst of it", he said. "The worst of it is sitting around the house eating meals on time, resting and socializing". During the next few weeks I was to endure his whining, irritability, boredom, impatience, criticisms, and long periods of silence. "Why don't you have a mid-life affair like other men do?" I asked. "Who would look at anyone who can't run a 10 K?" he sneered. "For God's sake woman. When will it sink in that I have a pulled hamstring? I'm doomed to another week in this house with nothing to look forward to in the mornings but reading the paper and drinking coffee. All I have left is my sense of humour". Divorce would be too good for him.

(Bombeck, 1984, C7)

As the result of the apparent absurdity of such a situation, the above passage, taken from a recent newspaper, can be considered quite humorous. The poignancy of the scenario is increased with exaggerated contrasts between the perspectives of the woman and her husband. However, the situation which is described has come to be commonly associated with people who are considered 'addicted' to running.

Four of the men who participated in this study, three *Perennials* and one *Adopter*, were long-distance runners. Although these men were not typical of the remaining *Perennials* and *Adopters*, their involvement in running provided clear examples of a number of the processes and situations described in previous chapters. Consequently, the material obtained from these

men, in relation to running, will serve a number of purposes. Firstly, it will illustrate the extent to which involvement in physical activity can occupy significance in the life of a middle-aged man. Secondly, it will provide an example of the way in which this degree of significance can develop and increase over a period of time. Thirdly, the importance of definitions of fitness, objective levels of fitness, and self-assessments of fitness to these men will be demonstrated. Fourthly, the central characteristics of the identity of a *serious runner*, and the way in which these develop, will be reviewed. Finally, the extent to which running can provide commitment, control and challenge, and both promote and alleviate stress, will be evident.

The chapter will be divided into four major sections. The first of these will deal with the concept of 'addiction' to running, and will examine its relevance to the lives of the serious runners. The second section will focus on one of the *Perennials* and a detailed biography, specifically focussed on involvement in exercise, will be presented. The third section will consist of the identification and characteristics of the *serious runner*. The final section of this chapter will focus on an examination of the similarities and dissimilarities between the characteristics of *serious running* and anorexia nervosa. This comparison will be made in view of research which has previously drawn a parallel between the two patterns of behaviour, and the implications of such a relationship for the understanding of the *serious running* of middle-aged males.

ADDICTION TO RUNNING

Addiction is an everyday phenomenon. In one form or another, it is probably a necessary survival mechanism for all species. Generally, though, we only regard behaviours as addictive when they come to be associated with socially reprehensible acts such as drug taking. Functions such as love, play and sport are not only positive in proper doses, but may be vital for a full, stable and 'self-actualized' existence.

(Egger, 1981, p.88)

The *Perennials* and the *Adopters* reported a wide variety of involvement in exercise. The differences in the frequency, duration and intensity of physical activity in the lives of these

men were described in detail in Chapter III. Several of the men who led extremely active lives indicated that exercising every day had become a 'habit' which they tried not to break.

I have got into the habit of exercising every day and I don't like to miss a day
— I'm a seven-day-a-weeker in relation to physical activity.

The increasing frequency with similar comments have been made by regularly active people, and runners in particular, has led to the belief that involvement in physical activity can become addictive. The consideration of the addictive nature of running has resulted in a number of studies which have examined the beliefs held by runners in relation to their involvement. A survey of three hundred and fifteen runners was conducted in order to obtain descriptive information about attitudes toward running, mental states during a run and the perceived outcomes of running (Carmack and Martens, 1979). By their own standards, thirty percent of the runners believed they were 'very much addicted to running' and fifty-four percent believed that they were 'somewhat addicted'. In addition, the runners who scored highly on the scale of 'Commitment to Running' justified their involvement in running in relation to a variety of psychological effects (Carmack and Martens, 1979).

The examination of the proposition that running can be addictive has been complicated by the contrast between the consideration of frequent involvement in activities which are endorsed and promoted by society, and the negative connotations traditionally associated with the word 'addiction'. Relatively few attempts have been made to resolve this paradox. However, the most influential piece of work to address the issue was based on the distinction between 'positive' and 'negative' addiction (Glasser, 1976). The concept of positive addiction is based on the premise that addiction to some activities can result in beneficial physiological and psychological effects which can make a significant contribution to optimal functioning in other areas of life. The 'positive addict' can be distinguished from the 'negative addict' on the basis of both physiological and psychological dependence. The individual addicted to physical activity is characterized as being significantly fitter than an average member of the general

population. In contrast, ill-health is typically associated with addiction to a wide variety of activities commonly considered vices. Similarly, impaired psychological functioning is considered characteristic of the 'negative addict'. However, it has been argued that the psychological benefits of a positive addiction can provide an individual with psychological strength, and an increase in the satisfaction derived from life (Glasser, 1976). An activity which is perceived to enhance the satisfaction derived from life should be continually sought by an individual. Consequently, one of the major characteristics of an addiction is the compulsion to continue involvement in the activity.

I tend to run primarily for myself, but there's really something compelling about it.

A dramatic example of the compulsion to run was provided by one of the *Perennials*. After spending many months training for a prestigious marathon in another city, he travelled to the city where the race was to be held. Several days before the race he attended a track and field competition, as a spectator, in poor weather conditions. As a result, he developed a chill and was confined to bed. Refusing to heed medical advice not to run in the marathon, he completed the race and was subsequently hospitalized with pneumonia. Despite coming close to death as a result of his illness, he resumed his running as soon as he could.

I refused to not do exercise when I had pneumonia. My wife got very worried because within three weeks of leaving the hospital I was out running. I was as weak as a lamb and it was snowing, but I just bundled up and went for a three kilometre run, which took twenty-one minutes. I just decided that I was going to do it. I took it easy, but it was pretty depressing to think that doctors were saying "You shouldn't do this", "You shouldn't do that", and I wasn't taking any notice of them.

The relationship between involvement in physical activity and stress was considered in detail in the previous chapter. However, the relationship has also been considered in relation to the concept of positive addiction. It has been argued that if an individual perceives an activity or sport as an important contributor to coping with problems, on a regular basis, then involvement in that activity may take on all the characteristics of an addiction (Glasser, 1976).

The compulsion to exercise as a means of reducing stress was illustrated by one *Perennial* who considered a hypothetical situation in which he had permanently lost his ability to run.

I don't know what I would do if I wasn't physically active in terms of alternatives for coping with stress and so on. It's certainly essential for me. I would say that even if somebody cut off my legs and I had to use a wheelchair, I'd be flying around in that wheelchair in order to keep the rest of my body physically active.

A definition of running addiction was proposed as a result of a study which examined reasons for the initiation and maintenance of regular running (Sachs and Pargman, 1979). Running addiction was defined as addiction of a psychological and/or physiological origin which was marked by the appearance of withdrawal symptoms when running was curtailed. The authors argued that the experience of various symptoms of withdrawal was a crucial determinant of the degree of addiction to running. Research which has focussed on the effects of 'withdrawal' from habitual running, and in relation to positive addiction in general, has been limited by the difficulty associated with obtaining runners who are prepared to give up running for any length of time. One study which attempted to study the effects of running deprivation included fourteen men who exercised three or four times a week (Baekland, 1970). These men were included in the study only after more active runners declined substantial financial reward to refrain from running. Several potential participants indicated that they would not discontinue running for a month for any amount of money. However, a number of 'withdrawal symptoms' have been identified as a result of reports associated with voluntarily reducing running, and involuntarily reducing running as a result of injury.

It has been argued that positive addiction can be readily recognized by the discomfort, anxiety, guilt and irritability which result from withdrawal from the activity (Glasser, 1976). One *Perennial* clearly expressed these sentiments, and speculated on the possibility that they reflected his addiction to running.

If I miss out on my activity in the morning, I really don't feel very well. I'm

irritable and uncomfortable during the day. It's almost to the point where it is an addiction. I'm not to the point where I have to do it every day. If I'm sick or not feeling well I just won't do it. I try to be quite rational about it.

In view of the extent to which the regular runners regarded running to be a fundamental aspect of their lives, it was not surprising that its omission from their lives produced an awareness that something was missing.

There's a period where you get by and you feel okay, but sooner or later you begin to feel that you're missing something. I certainly feel badly enough about it to go through the pain of getting back into it again as quickly as possible.

The omission of any other activity which was included in daily life could be expected to produce the same awareness. However, missing several days of running was associated with a great deal of guilt and self-reproach.

I've been running for about fifteen years...to the point that if I have three or four days off, I have an incredible guilt about not doing it. It's a guilt thing that it tends to perpetuate. You tend to do things by setting up a standard, and if you miss out on it you start feeling guilty that you've let yourself down.

Each of the regular runners placed a great deal of emphasis on the fact that his running was associated with a great deal of personal control and responsibility. One of the *Perennials*, when questioned about aspects of his running that he disliked, described his compulsion to run every day, irrespective of how he felt or of the weather. At times, he disliked 'having' to maintain a self-imposed routine.

I don't like having to maintain a schedule on days even when I don't feel like running. I run year round, but the coldest I run in is -30°C — it's not much fun after that.

Although many people would argue that it is not much fun running when it is a lot warmer than -30°C, each of these men continued running, in all conditions, unless they were injured.

The psychological effects associated with the deprivation of running, as a result of injury, cannot be equated with the effects of voluntarily reducing involvement in running.

However, injuries requiring runners to reduce their running have produced some dramatic responses. It has been reported that one runner, who had recorded ten years of daily running, had hopped one and a half kilometres each day for a month with his leg in plaster as a result of an injury to an achilles tendon (Egger, 1981). An injury to the *Adopter* who had become a long-distance runner provided an excellent illustration of the development of an injury, the subsequent reduction in running, the psychological effects produced by the situation and the resultant efforts to overcome the problem. This man developed plantar fasciitis which can be classified as one of a number of running overuse injuries (Kavanagh, 1984). Without proper rest and treatment, the condition can become chronic.

In the course of training for another race I got plantar fasciitis and it really flared up. So I've actually had a low-level summer. I actually stopped running completely for a month. For the past three weeks, I have been running about sixty kilometres a week. So I guess by general standards that's quite good. By my standards it's minimal.

A knowledge of the injury, its aetiology and its potentially chronic effects, reflected the intensity with which this *Adopter*, with a non-medical background, pursued running. During the month in which he did not run, he experienced the 'withdrawal symptoms' commonly associated with running deprivation. The predominant feeling was one of frustration, emanating from two sources which he readily identified. Firstly, he greatly missed the 'joy of running'. Secondly, he believed that he was not 'making progress' towards his goal of optimum performance. The concern of this man over decrements in performance is indicative of the passion with which achievement is pursued by regular runners. For them, inactivity can be equated with some form of terminal illness. To combat his feelings of frustration, the injured *Adopter* began swimming. Although describing himself as a 'poor swimmer', he swam on two or three days of the first week, every day for the ensuing two weeks, and finally, two or three days during the final week as he contemplated his return to running.

Swimming was just something to get the juices flowing again, something to make me feel that I wasn't rotting away.

Since his period of swimming, this man trod a fine line between running and aggravating his injury. When last contacted, four to five months after the injury first became apparent, he was dejectedly returning from the pool.

SUMMARY

The previous section has examined various characteristics of the potentially addictive nature of running. The distinction between 'positive' and 'negative' addiction was reviewed. A number of comments, made by several of the men who participated in this study, were presented to illustrate the compulsion to run which can be experienced. The effects of withdrawal from running, both voluntary and involuntary, were also identified. However, this material did little more than support the findings of previous research.

The research related to running as an addiction has remained relatively stagnant for several years. A variety of explanations, based on physiological and psychological factors, have been used in an attempt to explain why some people become 'addicted' to exercise (Pargman and Burgess, 1979). In addition, a number of studies have confirmed that running can fulfil the criteria necessary for it to be considered a legitimate process of addiction (Jacobs, 1982). However, it has been argued that there is a great need for research related to an identification of the stages through which an individual passes in the development of addiction to running (Sachs, 1981). The next section of this chapter will focus on the biography of one of the *Perennials*. After a number of years of relative inactivity, this man increased his involvement in running greatly. Although the point at which he could have been considered addicted to running was difficult to identify, a number of aspects of his involvement provided clear illustration of his emerging identity as a *serious runner*.

PROFILE: MARK TIBBAR

PAST AND PRESENT

Mark Tibbar was born in the American southwest. The youngest of nine children, Mark grew up on his parents' farm. The farm was not particularly prosperous and, combined with the demands of nine children, resulted in the family living 'a little above subsistence'. The farmhouse was two kilometres away from the primary school which Mark attended, and he always travelled the distance in the school bus. Mark recalled being involved in both formal and informal sporting activities during his years at school. His athletic abilities enabled him to be selected on teams in a variety of sports which included soccer, baseball and touch football. Mark successfully combined his involvement in sports with his academic pursuits and recalled doing "fairly well" in relation to his grades. Mark believed that he was lucky to have had the opportunity to be involved in leisure and social activities during his school years. Although all the members of the Tibbar family worked on the farm, Mark's position as the youngest child ensured that he had relatively more flexibility and freedom when it came to farm duties.

Towards the final years of high school, Mark decided that a university education was essential for a successful future. The three youngest children in the family all attended university and completed a variety of Bachelor's degrees. Consequently, after leaving high school Mark left the farm and moved to the Los Angeles area in order to attend university. Although unsure of the field of study which he wanted to pursue, Mark entered a programme after taking advice from a friend.

I got into this area mainly through a friend who was working in the area. I was looking for a major and he suggested it. I was in business administration and I just found it so boring and I didn't know what to do. So this fellow said "Why don't you try this? It's kind of interesting" — so I took some courses.

A number of the men who participated in this study reported that their involvement in physical activity declined drastically after leaving high school and entering university. Mark was

no exception. He took the demands of his programme seriously and found little time for sport or social activities. Mark's conscientious involvement in his programme ensured that that physical activity was not greatly missed.

I didn't play sport on any university teams. I was not really very actively involved physically at university. I spent a lot of time studying and just sort of fell away from a lot of physical activity. I'd play an occasional game of tennis or something like that but, by and large, I was pretty inactive throughout university I was too worried about getting marks and getting through.

After successfully completing his Bachelor's degree, Mark immediately moved to another city and entered a graduate programme renowned in his field of interest. He completed his Master's degree a year and a half later. After completing his first graduate degree, Mark accepted a position at a university in Colorado. Although he initially enjoyed the job very much, the position was predominantly one of administration, and Mark became increasingly dissatisfied. Consequently, Mark decided to return to university in order to complete a Ph.D. and pursue a career in teaching and research. Two years after completing his Master's degree, he returned to the same university and began his doctorate. Mark's sporadic involvement in physical activity had not changed, but after returning to university he became increasingly concerned about being overweight. Mark began to restrict the amount of food which he consumed. In addition, he added to his occasional involvement in golf and racquetball with occasionally running around a local schoolyard.

I'd put on some weight and I was trying to take it off and I thought "Maybe a bit of running would also help". I was quite heavy — forty pounds more than I weigh right now. That's what happened when I started university. I stopped being very physical, but continued to eat at the rate I did when I was really active and I really put on weight. I had an image of myself as being athletic and not being heavy and so the whole idea of being fat and out of shape was sort of contrary to my image of myself. There was just a natural tendency to get back into more physical activity and getting back to my former weight level. I weighed between 145-150 at high school. I aimed at 155-160 and I did get down there, and that's where I stayed through most of my doctoral programme.

The period of Mark's life between leaving high school and working on his doctorate, reflected his efforts to advance along a career path and form a satisfactory life structure

(Levinson et al., 1978). During the last year of his doctoral programme, at the age of twenty-eight, Mark married, and the family was completed with two children from his wife's previous marriage. A major readjustment in Mark's life occurred after he completed his PhD and was successful in his application for a job at a Canadian university. Although neither Mark nor his wife had been to Canada, they agreed to the move, with the intention of staying a couple of years. The changes in Mark's life during these few years clearly constituted a number of characteristics associated with the *Age Thirty Transition* (Levinson et al, 1978).

The initial adjustments required by the move to Canada resulted in both Mark and his wife seriously questioning their commitment to the situation. Mark's wife had never left the environment in which she had grown up, and Mark found the demands of his job particularly onerous. However, Mark described both he and his wife as 'persistent people' and neither of them appreciated the thought 'giving up' and returning to the United States. Mark remembered his first year in Canada as an "absolutely terrible" year. In addition to the problems associated with the move, and his new job, two of Mark's brothers died unexpectedly at the ages of forty-nine and fifty-two. Mark and his wife both felt extremely stressed and they began to look for ways to decrease the levels of stress which they experienced.

One thing we did was that we started using transcendental meditation as a technique for stress reduction. I think that was the beginning of getting more and more health conscious. Being very stressed, knowing that I needed some form of stress release and then doing this technique made me realize that there were ways of making myself feel better and that sort of opened up into the whole idea of getting myself into better physical condition.

At around that time, an acquaintance, who was a runner, gave Mark a copy of *Aerobics for Men* (Cooper, 1970). Soon after, Mark started the conditioning programme, and began running in place for two minutes every day. After two weeks, he began to increase the routine gradually until he was jogging, in front of the television, for ten minutes each day.

It's such a structured programme I'm a lot less compulsive than I used to be, but the idea of having this real structured programme to follow was

appealing, and I followed it religiously.

Mark had commenced the programme soon after Christmas and was restricted to staying inside because of the temperature. However, after he had followed the routine for several weeks, the weather had moderated and Mark began to run around a nearby schoolyard. He initially aimed to run around the yard for twelve minutes.

I can still remember how elated I was when I reached the point where I could run without stopping for twenty minutes. I felt almost as good as being able to finish my first marathon.

Mark continued his running, and began to run around various local routes. He was soon running about forty kilometres a week, at around five minutes for each kilometre. This pattern continued, during the warmer weather for two or three years, and Mark bought an exercise bicycle which he rode regularly in winter. Mark reflected with some amusement on his running patterns during those years.

I didn't know about how to really train for running. My idea of running was to go out and run your guts out for a period of time — until you were extremely tired — every day. And so I'd go out and run five or six kilometres, really hard, every day and then always wonder why I was so tired in the afternoons.

A major change in this pattern occurred when Mark took a sabbatical leave for a year. In view of his wife's commitment to her occupation and his children's commitment to school, Mark decided to remain in the same city. Although he travelled to a number of different conferences, the majority of his time was spent at his home and at the university. Mark had always based his running from his home. However, during his sabbatical year he decided to use the university facilities for changing and showering. When he first began to run at the university, Mark considered himself to be in "fairly good shape". However, he quickly encountered a number of better and more experienced runners. As a result, Mark became more interested in racing and began to absorb information about various training techniques. During the summer months of that year Mark entered several 'fun runs' and was pleased to do

"relatively well".

At the age of thirty-four, Mark decided that he was going to become a lot more involved. He aimed to run further and faster during the following summer. However, his trips to his parents' home, which the family made each summer, precluded the involvement in running for which he had aimed. Three years before he was interviewed, when Mark was thirty-six, he accepted a position as acting Chairman of his department. The demands of the administrative work, in addition to his research and teaching responsibilities detracted even further from his involvement in running. After running fifty kilometres a week at a five minute pace, Mark was struggling to run twenty-five kilometres a week at a six minute pace. Mark was concerned with the decline and decided that if he was to renew his interest in running he needed to set a goal. The local marathon was being held several months later and Mark decided to set a goal of finishing the race. Throughout the months prior to the marathon, Mark followed a "simple little thing on marathon training" which he had clipped from the paper. Once again, Mark followed its recommendations "religiously". Although Mark found the last third of the run extremely difficult, he finished the marathon and "was just ecstatic that I was able to run that distance". Completing the marathon marked an important turning point in Mark's involvement in running.

That winter I began to run more and I even went to the extent of buying myself a Goretex¹ running suit — that was some sort of a sign — I got my fancy running suit, some really good winter shoes and I started to run outside on a regular basis. Even when it was -30°C I'd bundle up and go out and run. All through that winter, even when I could only run four days a week, I was putting in between twelve and fifteen kilometres every time.

When asked why he thought it was important to run outside when it was -30°C, Mark further elaborated on the extent to which his finishing the marathon signified an important turning point in his involvement in running.

¹ A waterproof and windproof material which 'breathes', allowing perspiration to evaporate. Goretex[®] running suits currently retail for around \$300.

I guess I found that being able to survive a marathon put me at some kind of new level of running. I'd kind of surpassed the sort of basic jogging and I was at a more serious level. The idea of trying to run competitively certainly seemed like more of a reality to me. I knew more, I was more sophisticated about running, having followed a regular training schedule for a while — I think I was just more sophisticated.

Mark's belief that he had reached a 'new level of running' appeared to be based on three major characteristics. Firstly, he had 'survived' a marathon. Secondly, he had begun to consider running competitively. Finally, the fact that he 'knew more' about running contributed to the profile of a 'more sophisticated' runner.

I sort of view surviving that first marathon as the point at which I became more of a serious runner. I mean, that led to more winter running and it led to some races in the following year where I began to run some fairly decent times. Then in the following spring I began to run with some guys who were pretty experienced runners This other guy, also a novice runner, had started running with them and he had just invited me along one time. He and I were sort of at the same level, so when the other guys took off and left us, we had somebody to talk to,

Mark had continued running with the same men for the following two years — until the time of the interview — and it was evident that his self and identity as a *serious runner* had continued to develop since he had first joined the group. The difficulties he had initially experienced as a result of maintaining the same distances and speed as the other group members were resolved as a result of a change in attitude and a decision to monitor his performance.

What I found initially with these guys — who are pretty elite runners — I tried to keep up with them every day, so for me it was like a race every day and for them it was like a normal training run. I couldn't keep that up. So in my developing maturity as a runner I decided that I had to run at my own level, rather than trying to keep up with these guys every day. I had to decide what was appropriate for me and so what I decided to do was to write out a programme that I would follow and one way of insuring that I would follow it was to log it everyday.

The log book was described by Mark as being 'just your basic log'. It consisted of a weekly diary designed for use by runners. Each week was spread across two pages, the first

covering weekdays, and the second, the weekend. The first page was headed with 'Distance Carried Forward', and this was followed by a quotation from literature specifically related to running or movement. Each 'day' contained the headings 'Where and When', 'Distance' and 'Time'. The second page included a photograph of an individual or group of people running and was completed with the headings 'Distance this Week' and 'Weight'.

An examination of a 'month' taken from the diary indicated that the information Mark recorded included the course of the run, the distance covered, his time and his pace. In addition, Mark noted his subjective evaluation of the 'quality' of the run, and his pulse rate. If running with others, their names would be added, in addition to comments about the weather and other descriptive information. Although the 'Distance Carried Forward' contained his cumulative distance for the year, the 'Weight' section at the end of each week was left open.

Oh, I guess keeping a log is just another reflection of what serious runners are supposed to do. It allows me to keep track and count kilometres to be sure that I am staying consistent. It's a way of reminding me to be organized in my running. So if I write down one day 'slow recovery run' then I anticipate the next day doing something hard and that for sure the next day I'll go out and do something easy.

Although Mark did not record his weight in his diary, he described monitoring his weight closely, and ensuring that he did not deviate from the two kilogram range of weights which he regarded as optimal. He described the fluctuations in his weight which occurred throughout each week. He described himself as being heaviest early in the week, after the weekend, and lightest as he approached the following weekend. Mark described the 'cutting down' which was sometimes required, and the 'splurging' which resulted from several days of continued weight loss. The results of his fitness test indicated that Mark was a lean 14.7% body fat.

I'm sure I border on the compulsive side of monitoring my weight without being anorexic, or you know, pathological. I think I'm fairly organized and about things and weighing myself — keeping a log — it's all just part of my style in terms of handling whatever it is that I do.

Mark checked his weight after every run, before showering. The monitoring of weight was just one aspect of the highly routinized process of running which Mark had developed. The routine was one which Mark did not like to break. However, a short time before the interview, Mark had some trouble with shin splints, a painful overuse injury which can affect runners, particularly those running on hard surfaces. For Mark, it was the first time that an injury had forced him to stop running. As reported earlier in this chapter, the experience is usually not a pleasant one for a long-distance runner.

I didn't like it. Four days without running was my maximum, and I started to feel the need to get back into it. It was a sort of 'out of sorts' feeling — a lack of balance. I'm used to that sort of physical exercise. Running sort of mellows me out and I do other things better.

These comments were particularly pertinent in relation to Mark's initial attraction to physical activity as a means of reducing the effects of stress in his life. Mark believed that there had been an important interaction between his involvement in running and the way in which he created and dealt with stress. During the eight year period in which he had been running, Mark believed that running had been a causal factor in the production of a different lifestyle and attitude to life.

In general, my lifestyle and approach to things have changed. I'm less anxious about things. I'm more efficient in my management of time, more realistic in the goals that I set for myself in terms of job, or responsibilities, or just in general. I think partially that attitude has contributed to my changes in running. I used to be this person who would go out and run hard every day. Doing that every day made me realize that you can't take that approach to running, or to life in general, so there's been a kind of an interaction. I think in general I'm just less stressed and I now manage stressful situations better. I'm less reactive to stress.

PRESENT AND FUTURE

The difficult period of transition associated with the move to Canada gave way to a

period of stability in Mark's life in which he consolidated subelves and identities as university professor, husband and father, and *serious runner*. This process is considered to be indicative of the 'settling-down' period of male adult development (Levinson et al., 1978). After nine years in Canada, Mark Tibbar, his wife and family were well-settled. Mark and his wife both found their jobs interesting and rewarding, and the two teenage children had no desire to return permanently to the United States. The Tibbars were involved in a variety of occupational and community activities, and had developed many friendships. A number of Mark's friends were runners and Mark's wife thought it was great that Mark 'has a hobby'. Mark too, described his running as a 'hobby', but believed that his involvement in running was 'probably a bit more intense than your standard hobby'. The importance of subjective perception was clearly illustrated by Mark, who believed that he was not really a runner who was 'heavily involved'. His views were based on both the history of his own involvement in running, and his evaluation of the involvement of others runners with whom he was acquainted.

If I run in a range of around eighty kilometres a week, it doesn't really seem to be a — I wouldn't really call it 'heavily involved'. I just find that in that range I can still do other things. I will say that is one thing. If I get into the nineties it means that I'm pushing things a bit — I'm tired in the evenings, or I'm tired on a Sunday after a long run, and it does curtail some things. For example, my wife likes to go for walks, and if I have a run for sixteen kilometres in the morning, I don't really feel like going out for a two hour walk.

Mark believed that his wife supported his involvement in running. Although she had initially began running with Mark, she did not find it enjoyable, and soon stopped. However, she had become involved in aerobic dance classes, and had continued her involvement regularly because she 'enjoyed it immensely'. Mark's children are less enthusiastic about exercise, and Mark believed that they were quite ambivalent about his involvement in running. Although Mark believed that in some ways they were impressed with his running accomplishments, he also believed that with their 'adolescent mentality' they viewed his level of involvement in running as being 'somewhat stupid'.

The increasing age of the Tibbar children, and the development of their own life

structures appeared to be an influence in Mark beginning to review his past. The previous decade had been a period characterized by the consolidation of the central aspects of life, and the evolving structure had endured until the time of the interview. However, this period of stability was becoming the basis for comparison between earlier times in Mark's life when a great deal of variety had been experienced as he explored options within his life. These reflections on the past, combined with a consideration of options for the future, appeared to result in an increasing amount of restlessness. Mark equated the sudden emergence of these feelings with those which he associated with some form of developmental progression.

It's a matter of being somewhere and working and not having a change and we've never experienced that before. Looking back, I was either in school, or working, or back in school. I spent my summers working in different jobs. Suddenly we've been here ten years doing this kind of thing. I think there's a kind of natural developmental passage and you begin to question these things when you get to your late thirties about what you want to do with the rest of your life.

At the age of thirty-nine, Mark had begun to question his commitments in life. Although well-settled in his home, community and university, he had indentified the following year of his life as being particularly important. Mark had decided to take sabbatical leave for a year, and his wife was considering leaving her occupational field and returning to study at the university where Mark would be working. During this period, Mark had decided to consciously assess his options for the future, and he was uncertain of the course his life would take in the ensuing years.

We are pretty well settled here and we could stay. However, we are getting to the point where both kids are getting close to leaving home. We're getting to the stage of mid-life crisis or whatever, and trying to decide if we want to do this for the rest of our lives or if we want to begin to look for other kinds of things So, I'm going on sabbatical next year, and my wife is leaving her job and is considering going back to school so it will be kind of a pivotal year to decide what we want to do in the future beginning to think of what other options are available. Both of us have been kind of entrenched in the kind of work we've been doing for quite a while and you kind of start thinking this is the only thing that you can do — which might be true — but you wonder whether you're even a marketable quantity anywhere else.

These comments clearly illustrated the major characteristics associated with the mid-life transition (Levinson et al, 1978). However, despite Mark's indications that he was reviewing his commitment to several fundamental aspects of his life structure, his identity as a *serious runner* did not appear to be under review.

CHARACTERISTICS OF THE SERIOUS RUNNER

The biography of Mark Tibbar does not provide a great deal clarification of the stages through which an individual passes in the development of an addiction to running (Sachs, 1981). It was apparent that it was very difficult to identify a point at which Mark may have been considered 'addicted' to running. The traditional connotations of the word 'addiction' appear to be limiting when the concept is extended beyond the realms of dependence and withdrawal. In contrast, the concept of a *serious runner* appears to have far greater utility in an attempt to characterize the development of a specific identity. The comments made by Mark Tibbar, and the other long-distance runners who were interviewed, resulted in the identification of ten factors which could be considered prerequisites for an identity as a *serious runner*. Each of these characteristics have been discussed, in one way or another, in both academic and popular literature related to running. However, they have not previously been grouped and presented as the central characteristics of an identity as a *serious runner*. These characteristics are presented in Table 9.

Table 9 : Characteristics of the Serious Runner.

1. Survival of a marathon.
2. Investment in quality clothing and shoes.
3. Commitment to running in all conditions.
4. Awareness of the effects of not running.
5. Reliance on running for stress reduction.
6. Development of a running schedule.
7. Use of a log-book to record running.
8. Regular monitoring of body weight.
9. Orientation towards improved performance.
10. Interaction with other serious runners.

1. *Survival of a marathon*

The first characteristic essential to the process of developing an identity as a serious runner is the *survival* of a marathon. Although a marathon can be 'completed', 'finished', or 'run', each of the runners interviewed in this study specifically used the word *survived*. Within this context, times, places and subjective experiences are of secondary importance.

2. *Investment in quality clothing and shoes*

An investment in quality clothing and shoes is also characteristic of the *serious runner*. The training required to prepare for the marathon may result in equipment being bought before competing. However, for Mark Tibbar, and the three other *serious runners*, the purchase of equipment, such as Goretex® running suits, did not appear to be justified until after the marathon.

3. *Commitment to running in all conditions*

The investment in clothing which enables the *serious runner* to run throughout the year, in all weather conditions, results in a commitment to run in all circumstances. This results from the eradication of 'excuses' not to run which are based on environmental conditions. The commitment to run is also reflected in the continuation of running despite minor injuries and illnesses.

4. *Awareness of the effects of not running*

As a result of developing a commitment to running in all circumstances, the *serious runner* is aware of a variety of unpleasant effects which occur when running is voluntarily or involuntarily curtailed. This characteristic is indicative of the 'withdrawal' symptoms commonly associated with an 'addiction' to running. The voluntary cessation of running does not last long.

5. *Reliance on running for stress reduction*

An important aspect of 'withdrawal' from running is the heightened awareness of stress with which it is accompanied. Mark Tibbar had initially been attracted to physical activity, and running in particular, as a possible way to reduce stress. It was evident that the importance of running as a means of reducing stress was of continued importance to Tibbar, and the remaining *serious runners*.

6. *Development of a running schedule*

The information provided by popular books, magazines and other runners is an important factor in the development of a training schedule. Mark Tibbar's initial running was not guided by a particular rationale. However, he later based his training on a sophisticated programme designed to promote optimal functioning, speed and endurance. The schedule was rigorously controlled and followed.

7. *Use of a log-book to record running*

The diaries used by the *serious runners* varied, and one of the four men interviewed in this study only kept a record of his running sporadically. The remaining three men recorded aspects of their running which included distances covered, speeds, subjective evaluations of each run, pulse rates and injuries. One of the serious runners also monitored his diet.

8. *Regular monitoring of body weight*

The results obtained from the fitness tests indicated that the four *serious runners* who were identified in this study were amongst the leanest of the entire group. However, each of the men described continually monitoring his weight,

and focusing closely on the minor fluctuations which occurred over time. Each of the men described being overweight before beginning to run.

9. *Oriented towards improved performance*

In view of the nature of the activity, it is not surprising that each of the *serious runners* was oriented towards improving their performance. Performance was quantified predominantly in relation to time. Although an element of competition with others was present in races, the primary goal was to reduce the time and attain a 'personal best' (PB) over a specific distance.

10. *Interaction with other serious runners*

An integral part of the acquisition of an identity as a *serious runner* is the interaction which occurs, at all stages of the process, with other *serious runners*. This characteristic is essential in the affirmation of various aspects of the identity. The role played by others in developing, modifying and confirming a self-concept and identity which includes that of a *serious runner* is one of the most important characteristics of all.

A number of the characteristics identified above, and the processes they represent, bear a resemblance to a number of the characteristics commonly associated with anorexia nervosa. In recent years a number of researchers have suggested such a connection, but the associated research is marked with equivocality.

SERIOUS RUNNING AND ANOREXIA NERVOSA

Many long distance runners, mostly men, astoundingly resemble adolescents with typical anorexia nervosa. They are hyperactive, full of energy and hardly ever tire. They restrict their food intake, go on food fasts to attain the ideal

weight, and follow repetitive and routinized daily exercise programs with intense dedication. The fear of fat is constantly with them Like the anorectic, they keep a record of calories, as well as miles. Body-image distortions are common.

(Sours, 1980, p. 259-260)

Anorexia nervosa is a condition of self-starvation which has been described as a search for a sense of identity and self-hood characterized by narcissistic self-absorption, unrealistic goals, the struggle for control, hyperactivity, the denial of illness, distorted perceptions, obsessive-compulsive behaviour and the careful monitoring of weight and caloric intake (Bruch, 1977). Anorexia nervosa is usually observed in adolescent females but it has been estimated that between five and ten percent of all anorectics are males (Ziesat and Feguson, 1984). Although there is general agreement in the literature that the characteristics of the disorder are the same in both sexes, it has been argued that there are important sex differences in relation to both the development of anorexia nervosa and the prognosis of anorectics (Andersen and Mickalide, 1983). One of the most striking differences is the increased frequency of adult onset in males, particularly around the age of forty.

Typically, they were a well-educated group, including several PhDs. Two thirds were in the professional and managerial social classes [Anorexia nervosa] usually begins with the concurrent occurrence of dieting behaviour and a significant life stress that overwhelms the individual's coping abilities the personality of these patients is usually highly obsessive and perfectionistic.

(Andersen and Mickalide, 1983, p.1068)

Although a number of authors have noted the similarity between some long-distance runners and the typical anorectic, the relationship has only recently become the focus of empirical investigation. One research study, in which long-distance running was described as an analogue of anorexia nervosa, produced considerable controversy (Yates et al, 1983). The authors interviewed sixty runners who ran more than eighty kilometres each week and identified a group of men who were considered 'obligatory runners'. Little elaboration on the criteria for classification was provided. However, the authors observed that the character, style and background of these men were similar to those of the typical anorectic. The conclusions drawn

from the study were tempered with the suggestion that only a small percentage of runners share the characteristics of the anorectic.

Only a small percentage of runners or dieters become obligatory runners or anorexic patients. Their behaviour becomes pathological as a result of an extreme degree of constriction, inflexibility, repetitive thoughts, adherence to rituals and need to control themselves and their environment In this respect, anorexia and obligatory running are comparable to religious fanaticism or "workaholism" in that the pathology resides in the intensity and exclusiveness with which the adaptation is maintained.

(Yates, Leehey and Shisslak, 1983, p. 254)

The publication of the article produced comments from a number of researchers, most of whom were uncomplimentary. The research was described as being 'long on conjecture and short on data' (Wells, 1983; Stewart, 1983). The study was also believed to have provided 'a skewed view of runners and a narrow view of the subjects of the study' (Larson, 1983). Despite these criticisms, several clinicians confirmed the conclusions drawn from the study (Patel, Andrews and Bowman, 1983; Schnitzer and Schnitzer, 1983).

A more recent study compared a group of long-distance runners and a group of anorectics, based on the scores obtained on the Minnesota Multiphasic Personality Inventory (MMPI) (Blumenthal, O'Toole and Chang, 1984). The results indicated that the runners generally scored within the 'normal' range, while the anorectic patients did not. The authors concluded that runners do not suffer from the same degree of psychopathology as do patients with anorexia nervosa. The data were consistent with reports that people who engage in regular exercise are essentially well adjusted, and cope effectively with stress.

It is apparent that the opposing views associated with the relationship between anorexia nervosa and long-distance running are a result of attempts to equate the two phenomena, or discount any association. The material obtained from the interviews with the long-distance runners who participated in this study will be used to examine the *extent* to which *serious running* may be influenced by psychosocial processes similar to those underlying anorexia nervosa. Six characteristics associated with anorexia nervosa will provide the framework for the

discussion.

IDENTITY

During the last ten years emphasis in the aetiology of anorexia nervosa has shifted from a concern with psychosexual factors to a model which stresses the centrality of the struggle to establish a differentiated identity (Small, Madero, Teagno and Evert, 1983). Before the onset of the illness, adolescent females typically appear to be 'doing well', but their behaviour has been described as a 'compliant facade' to please parents or other authority figures, rather than being self-directed and self-initiated (Bruch, 1977). Adolescent anorectics will not accept anything from their parents, or the world around them. Instead, they direct all their energy toward the manipulation of their physical appearance, in their efforts to 'become somebody' (Ziesat and Ferguson, 1984). The material presented in Chapter V clearly indicated that, for one of the *serious runners*, who was an *Adopter*, running had contributed greatly to a sense of identity, and to self-esteem.

For some reason, I felt more whole, more complete, more integrated when not only was I a working professional but I was deeply committed to my personal well-being. The two of those together gave me a sense of well-being and self-worth I don't think I'd ever had previous to that.

The increasing emphasis in society on physical activity, physical fitness, shape and appearance was identified in Chapter V as a major influence on the *Adopters*, who had recently adopted a more active lifestyle. This endorsement of an active lifestyle, throughout society, has been paralleled by an increase in the occurrence of anorexia nervosa. During the last fifteen years anorexia nervosa, previously considered a rare disorder, has increased in incidence to the extent that it is currently regarded as a significant health problem (Yates et al., 1983). It has been argued that in contemporary society men are subjected to far less pressure to be slim than are women, and this has been considered the primary explanation for the fact that the incidence of anorexia nervosa in males is so much lower than that observed for females (Andersen and

Mickalide, 1984). However, the search for a differentiated identity appears to be a common characteristic of both *serious runners* and patients with anorexia nervosa.

ACTIVITY

Further demonstration of the extent to which *serious runners* include long-distance running in their daily lives would be redundant. However, typically, anorectics are also extremely active people. The report of three case studies dealing with adult men indicated that each man followed an exercise regimen considered by the clinicians to be excessively rigorous (Ziesat and Ferguson, 1984). The literature related to anorexia nervosa commonly describes increased physical activity during the acute weight loss stage of the process. However, little attention has been paid to the nature of physical activity before onset, during treatment, or after recovery from the illness.

In an attempt to investigate the relationship between physical activity and anorexia nervosa, a study was based on the records of a group of anorexic women discharged from a hospital over a ten year period (Kron, Katz, Gorzynski and Weiner, 1978). Each case was reviewed in order to establish the incidence of intensive physical activity before, during and after the period of hospitalization. The results of the project indicated that intense physical activity was an early and enduring clinical feature of anorexia nervosa in the women, and was not secondary to a conscious attempt to lose weight.

These findings have been contradicted as a result of preliminary studies with animals, which have examined the relationship between physical activity and a restricted diet (Epling, Pierce and Stefan, 1983). Rats given unlimited access to treadmill wheels began to cover distances of up to fifteen kilometres a day. At the same time, the long distance runners began imposing their own restraints on their already restricted food intake, resulting in emaciation and, in some cases, death. It has been argued that these findings support the possibility that there are a group of highly athletic, dieting, human anorectics (Epling, 1984). The results also

led to the argument that when combined with extreme physical activity, a restrictive diet may greatly enhance the possibility of 'athletic anorexia'. It is evident that within such a conceptualization, extreme involvement in physical activity is regarded as a cause, and not an effect, of anorexia nervosa.

MONITORING

Anorectics, not surprisingly, monitor their weight and, in many cases, their involvement in physical activity (Ziesat and Ferguson, 1984). The diaries used by the *serious runners* to record a variety of characteristics associated with their running were discussed earlier in the chapter. In contrast to the remaining three *serious runners*, one of the *Perennials* closely monitored the food which he consumed.

I'm a calorie counter, I can tell you for every day I keep a record of my jogging or *running* and keep count of calories ... I've got records for the last four years.

The *serious runners* also monitored their weight carefully. Although each man had a low percentage of body fat, body weight was measured every day. One *serious runner* described the process, and its justification.

All of the guys weigh themselves every day. There's absolutely no reason to do that, but they do. They want to be absolutely certain that they are, sort of, at peak weight For a runner, excess weight means you're not going to be the best — you're not going to do as well as you can.

PERFECTIONISM

It has been argued that the primary goal of the anorectic is a life of absolute perfection (Bruch, 1977). The desire to lose weight and eliminate all body fat is the manifestation of this unachievable goal. In addition, research conducted solely with males has indicated that perfectionism is a dominant feature of personality (Andersen and Mickalide, 1983). Similarly,

as reflected in the quotation presented above, the *serious runner* strives to be 'absolutely certain' that he is in optimal physical condition. Each of the *serious runners* spoke of their desire to improve times, run a marathon in under three hours and achieve a 'personal best'. Although a 'personal best' provides a reference point which provides motivation, measurement and meaning, it does not constitute *achievement* (Little, 1979).

The *Adopter* who was a *serious runner*, as detailed earlier, suffered an injury which prevented him from running.

I think I went through some really tough times. I really missed running. I found myself frustrated, both because I wasn't making any progress towards my ultimate goal of beating Lopez¹ — the ultimate fantasy!

DISTORTED PERCEPTIONS

A disturbed body image is an almost universal finding in patients with anorexia nervosa, and anorectics are unable to see themselves and their dramatic emaciation realistically (Garner, Garfinkel and Bemis, 1982). In an attempt to investigate the accuracy of the body perceptions held by runners, results obtained from thirty-one 'habitual' male runners and eighteen sedentary controls were compared (Wheeler, Conger, Wall, Belcastro and Cumming, 1984). The long-distance runners, who ran more than seventy kilometres each week, showed similar distortions in body image to those reported in anorectic patients. The injured *Adopter*, who gained some weight as a result of reducing his involvement in running, provided a detailed description of changes in the way in his body was perceived by himself, and by his wife.

I did in fact gain some weight. I had difficulty staying away from food, so I went from an optimal sort of, one hundred and thirty pounds up to one hundred and thirty-six, thirty-seven. Certainly, it wasn't that bad It wasn't anything like I was before you know, one-fifty five, one sixty, but I could feel the weight and it was tough. I could see it and so could my wife. The way she described it was that I no longer looked like an emaciated wimp. She felt that I had been a little too thin and so felt that my face now looked healthy and

¹Carlos Lopez, at the age of *thirty-seven*, won the men's Olympic Marathon in 1984.

I looked a little thicker through the middle my wife said that I had looked like a skeleton, especially in the face. I've seen it in other people that lose a lot of weight. It looks really funny, sort of ill. She sort of described me as looking like that but I didn't really see it It's somewhat difficult to objectively evaluate how you look. There have been times when people have said to me "Look, you're just fine. For God's sake don't get any thinner." And I would say to myself, "Yeah, but boy, a couple more pounds and I'd feel really super."

CONTROL

The majority of research related to anorexia nervosa in males has indicated that, irrespective of the origins of the illness, most patients eventually try to control their environment in a meticulous fashion by strict dieting and excessively rigorous exercise schedules. However, it has been argued that, underlying these dynamics is a fear of being *out of control* (Ziesat and Ferguson, 1984). There was no doubt that the *serious runners* maintained close control over their running and their weight. Mark Tibbar believed that his 'maturity' as a runner had been an important influence on the way in which his running was controlled.

I think I've reached a point I feel that I'm more in control of my running than I used to be. I used to think that I had to keep up to people. I think I was more of a slave to running than I am now. Now, I'm more in control of my own running schedule, and for me that's a kind of a level of maturity for a runner and I feel like I've reached that point.

SUMMARY

There can be no question that many of the characteristics associated with the *serious runner* parallel central features of anorexia nervosa. The search for a differentiated identity, often associated with the the process of individuation at mid-life, appears common to both. A level of involvement in physical activity, far beyond that observed in the general population, is associated with both groups. The monitoring of exercise and weight and the desire for control, typical of perfectionists, is also evident. Distorted perceptions of body shape and size have been

established in *serious runners*, and long documented in anorectics. The list could be extended, with factors such as the denial of illness that usually occurs in anorectics, and is often associated with the occurrence of running overuse injuries. One additional factor appears to be quite significant. Clinical studies associated with adult male anorectics have indicated that the onset of illness is associated with stress which overwhelms the capacity for coping. The role of running in alleviating the stress in Mark Tibbar's life was documented earlier in this chapter.

Despite the undoubted similarities between the characteristics of anorectics and those of *serious runners*, major *dissimilarities* exist in two crucial areas. Firstly, it has been stated in the literature, and it appeared evident in this study, that *serious runners* do not exhibit the psychopathology of anorectics, nor does their health appear to be threatened. However, the dissimilarities in relation to the absence of psychopathology and severe illness should not result in the similarities between the two phenomena being entirely dismissed. The absence of psychopathology and severe illness does not preclude the possibility that a concern with identity, and a reduction of stress through the control and achievement of performance, provides the basis for *serious running*. In addition, the current emphasis on leanness in society may promote a convergence of *serious running* with the deadly characteristics of anorexia nervosa.

CONCLUSION

As a result of the interviews conducted with the men who participated in this study, it was evident that involvement in physical activity was a focal point in the lives of several men. In particular, four men were enthusiastic long-distance runners.

Running is very important, it's part of my daily routine. It is an influence on what I eat, how much rest I get — I guess it's pretty much a lifestyle kind of thing. It has a pervasive effect on my life.

In order to further investigate the centrality of running in the lives of these men, this

chapter initially focussed on the concept of 'addiction' in relation to running. The distinction between 'positive' and 'negative' addiction was made. This distinction was based on the belief that 'positive' addictions provide beneficial physiological and psychological effects which can make a significant contribution to the life of an individual. A major influence in the development of a 'positive' addiction was identified as the belief of an individual that an activity or sport provided an important contribution to the ability to cope with stress. Each of the long-distance runners described their compulsion to run. A number of the effects commonly associated with a 'withdrawal' from running, including guilt, anxiety and discomfort, were also identified. These findings supported the results of previous research related to running. However, they appeared to provide little clarification of important stages in the process of addiction. In order to examine this process further, a biographical description of one of the runners who participated in this study, who had increased his involvement in running over a six-year period, was presented.

Although the biography of Mark Tibbar did not provide a great deal of clarification of the process of addiction, it clearly described the development of an identity as a *serious runner*. The development of this central identity was paralleled by the consolidation of identities as husband, father and university professor. This process occurred during a period of life which has been identified as the *settling-down* period of male adult development (Levinson et al., 1978). As a result of the biography, and the information provided by the other runners in the study, ten characteristics of the *serious runner* were identified.

The first of these was the ability to survive a marathon. This appeared to give the runner the prerequisite status necessary to initiate the process. Although quality clothing and shoes are available to all runners, it was apparent that the purchase of this equipment was important to the *serious runner* for two reasons. Firstly, it could be regarded as symbolic of an identity as a *serious runner*. More importantly, it provided the *serious runner* with an affirmation of his *commitment* to run in all circumstances. These included adverse weather

conditions and those provided by the occurrence of minor injuries.

The commitment to running in all circumstances led to an awareness of the effects of not running. Although these occasions were infrequent for the *serious runners*, each reported the effects commonly associated with 'withdrawal' from running. One of the most noticeable effects of not running was a resultant increase in the levels of stress which were perceived by each man. The identification of this relationship provided evidence that each man relied on running as a means for the reduction of stress. This issue was dealt with in detail in Chapter VI, but it was apparent that the benefits of physical activity in the reduction of stress were an important factor in the *serious runners* adopting and maintaining a schedule of long-distance running.

The development of a running schedule and the rigour with which it was followed was indicative of the *control* which each man exercised over his involvement in running. This was further expressed in the way in which diaries were used to record and monitor various characteristics of performance on a continual basis. Each *serious runner* was found to have a relatively low percentage of body weight. However, each of the men monitored his weight regularly. The *challenge* of involvement in running was reflected in a number of ways, including the constant desire to improve performance. Finally, one of the most important characteristics in the development of an identity as a *serious runner* was the interaction with other *serious runners*.

In recent years, a number of empirically based studies have addressed earlier speculation that long-distance running was an analogue of anorexia nervosa. Although a number of similarities between the two phenomena have been reported in related literature, the absence of psychopathology and severe illness in long-distance runners has been considered sufficient reason to dismiss the association. The material obtained from the *serious runners* who participated in this study clearly indicated that many similarities exist. Characteristics of both the anorectic and the *serious runner* include an emphasis on identity, high levels of physical

activity, careful monitoring of weight and exercise, perfectionism, distorted body perceptions, and a concern with control. In addition, recent research has indicated that an inability to cope with stress is associated with the onset of anorexia in adult males. The association between *serious runners* and anorectics should not be dismissed on the basis of dissimilarities between the two. The characteristics of anorexia nervosa appear to provide a framework in which involvement in *serious running*, and its implications in modern North American society can be considered.

The use of physical activity as a means of establishing a differentiated identity and coping with the stress associated with the process of male adult development, has been the central theme throughout this thesis. The *serious runners* who participated in this study provided dramatic examples of this process. The remaining chapter will include a consideration of this finding within a synthesis of previous chapters.

Chapter VIII

PHYSICAL ACTIVITY AT MID-LIFE TRANSITION: A SYNTHESIS AND THEORETICAL FRAMEWORK

SYNTHESIS

The rapid expansion of interest in physical fitness and the increased emphasis placed on involvement in regular exercise in modern society has resulted in a great deal of research. However, research related to participation rates, and reasons for involvement in physical activity, has been distinguished by equivocality. In part, this can be attributed to the atheoretical and unsystematic approaches which have been adopted in research related to exercise involvement. A number of physiological, psychological and situational variables have been *associated* with involvement in exercise. However, very few researchers have attempted to identify theoretical frameworks within which the reasons *why* people initiate and maintain regular involvement in physical activity can be examined. Consequently, this research project was designed to provide a theoretical perspective with which to consider male involvement in exercise at mid-life.

An area of research which has been virtually ignored by researchers studying the involvement of men in regular exercise is that related to the process of male adult development. Research in this field has indicated that the middle years of the life of a man can be a stressful period, associated with a concern with identity and an increased awareness of the physical limits of existence. The recognition of the limits of existence is accentuated with changes in body shape and appearance, a concern with decrements in physical functioning, and an increased sense of mortality. In addition, mid-life has been associated with the review of past successes and failures, and a consideration of the relationship between the present life structure and long-held goals and aspirations. The result of this period of introspection is the modification of various aspects of life, in order to produce a more satisfying future. Placed within the context

provided by the theory of male adult development, this project was conducted in order to investigate the relationship between involvement in physical activity and the advent of middle-age in men.

Four areas were identified for study. These included: the psychosocial aspects of involvement in exercise; definitions of fitness, levels of physical fitness, self-assessed fitness, and the relationship between self-assessed and actual fitness; the centrality of involvement in physical activity and concerns with body shape and appearance on identity; and the relationship between involvement in physical activity and stress. Based on the research reviewed in Chapter II in relation to the process of male adult development, it was anticipated that a relationship between the characteristics associated with the *Mid-Life Transition* and involvement in regular exercise would be evident in a group of men aged between thirty-five and forty-five. It was expected that this would be reflected in a number of men reporting an increased involvement in regular physical activity during this period of their lives. In addition, it was predicted that the increased importance attributed to exercise by *physically active* men would be reflected with an emphasis on physiological functioning, the centrality of physical aspects of identity to identity as a whole, a concern with body shape and appearance, and the use of involvement in physical activity as a means of coping with stress. It was further anticipated that the substantiation of these circumstances would lead to the identification of a theoretical framework in which male involvement in physical activity at mid-life could be considered.

In view of the multi-dimensional nature of the project, a case study approach, based on obtaining information from a variety of different sources, was utilized. Thirty-eight male university staff members between the ages of thirty-five and forty-five responded to a number of open-ended questions, completed several self-rating scales and questionnaires, and underwent a standardized test of physical fitness.

The qualitative material obtained from the men who participated in the study, as a whole, provided a great deal of evidence of the characteristics commonly associated with men at

mid-life. Many comments were made which reflected an increasing awareness of the parameters of existence. In addition, it was evident that a number of the men were engaged in a conscious review and evaluation of both the past and the present. This was expressed in a variety of changes which had been made in different aspects of life, including those related to involvement in physical activity. The influence of the psychosocial characteristics typically associated with the *Mid-Life Transition* was clearly evident in relation to the four different groups of men identified in the study on the basis of their reported patterns of involvement in regular exercise. This can best be demonstrated with a synthesis of the material contained in the previous chapters in relation to the *Perennials*, the *Adopters*, the *Rejectors*, and the *Relegators*. Consequently, a review of the major characteristics associated with the men in each of these groups will be presented. The group profiles will precede a consideration of the theoretical implications of the results of the project.

THE PERENNIALS

The *Perennials* were a group of eleven men for whom involvement in physical activity was a central component of life and identity. As such, it was associated with the commitment of time, energy and enthusiasm. For the majority of the group members, this situation had existed throughout life. The remaining men had decreased their involvement in exercise during their early adulthood, but had later resumed their former exercise patterns. The *Perennials* clearly demonstrated that regular involvement in physical activity provided them with a reliable source of confidence, competence, and self-esteem. As a result, it was evident that their 'physical activity identity' contributed substantially to their identity as a whole. This situation was exemplified by the three *Perennials* who had pursued their involvement in long-distance running to an extent where each of them had acquired identities as *serious runners*.

The *Perennials* reflected an awareness of their increasing age, but their comments indicated that the aging process was accepted philosophically. The expression of involvement in

physical activity, particularly in the older men, appeared to be changing, with an increasing emphasis on activities which were less physically demanding. However, the *importance* of physical activity, and its significance in their lives, appeared to be constant. Many different reasons were offered by the *Perennials* to justify the value which they attached to exercise, but a recurrent theme was the sense of well-being which was derived from their involvement, and the resultant contribution to their quality of life. This emphasis was also reflected in the definitions of physical fitness which the men provided. The feelings of well-being which the *Perennials* associated with physical activity were more highly valued than any other factor, including the influence of exercise on optimal functioning or physiological performance.

The results of the fitness test indicated that the *Perennials* were amongst the fittest men in the sample in relation to cardiovascular functioning and muscular endurance. However, with the exception of body-composition, the self-assessments of levels of physical fitness provided by the *Perennials* were not strongly correlated with the actual measures which were obtained with the test of fitness. This result appeared to reflect the lack of emphasis on physiological functioning which was expressed throughout the material provided by the group.

Although the *Perennials* did not appear to be greatly concerned with physiological functioning, or with changes in shape and appearance, an interesting paradox became apparent. Despite their emphasis on the experiential aspects of involvement in exercise, it was evident that the group members, as a whole, were extremely performance oriented. This was reflected with an emphasis on comparisons of physical performance with the performance of others. Competition with men dissimilar to themselves, either in relation to age or sporting ability, appeared to be an important source of performance evaluation. This practice could be seen to function as a means of providing reassurance that their physical abilities were not deteriorating with the passage of time. For the *Perennials*, involvement in physical activity was a highly valued aspect of identity, and the evaluation of performance was structured to ensure the preservation of that situation.

The *Perennials* appeared to be relatively unaffected by the increased promotion of exercise throughout society. Although the 'legitimization' of something they had been doing for many years appeared to be welcome, the *Perennials* created the impression that they would continue their involvement in exercise under any circumstances. The men reported consciously using physical activity as a means of coping with the problems of everyday life. From an existential perspective, it was evident that a strong commitment to exercise and a belief in its intrinsic value ensured that physical activity was a *meaningful* part of life, and a central aspect of identity. Above all else, involvement in physical activity was an integral part of the evolving identities of these men. An autonomous, well-paid job, an established routine, and the support of family and friends all contributed to an environment which was extremely conducive to a long-term commitment to an active lifestyle. However, these aspects of exercise involvement appeared incidental in comparison to the relationship between physical aspects of identity and identity as a whole.

THE ADOPTERS

The nine *Adopters* who were identified in the study were all men who had renewed their involvement in regular exercise at mid-life after years of inactivity. Although each man had been active throughout childhood and adolescence, young adulthood marked the beginning of an enduring period in which physical activity was of little consequence. This situation, in each case, had changed significantly with the approach of middle-age, and involvement in regular exercise had become an important aspect of life. This process was dramatically illustrated by one of the *Adopters* who, after being inactive for many years, began running and eventually became a *serious runner*. Although a variety of reasons were provided by the *Adopters* in order to explain the increased emphasis which they had placed on involvement in physical activity, it was evident that characteristics commonly associated with the *Mid-Life Transition* were influential in producing a changed style of living.

The *Adopters* expressed a great deal of concern with their awareness of the effects of the aging process. It was evident that involvement in physical activity was perceived as a means of both minimizing the effects of the natural aging process, and compensating for years of inactivity, smoking, excess alcohol consumption and poor dietary habits. This situation was clearly reflected in the definitions of physical fitness which were provided by the *Adopters*. In contrast to those provided by the *Perennials*, the definitions adopted by the *Adopters* demonstrated an emphasis on the perceived role of physical activity as a means of extending both physical and mental capabilities. This view was further supported with the group perception of physical fitness as a state associated with efficient cardiovascular functioning, muscular endurance, and optimal body weight. A concern with the desire for high levels of physiological functioning appeared to be related to the perceptions of self held by the *Adopters*. The definitions of fitness which the men provided also included several references to the achievement of levels of fitness higher than those typical of men in the general population. The areas of functioning and physical performance appeared to be of paramount importance to the men in this group and very little emphasis was placed on the feelings of well-being associated with involvement in exercise which were valued by the *Perennials*. The way in which the *Adopters* emphasized physiological functioning appeared to represent the perception of physical activity as a means of denying the aging process (Colarusso and Nemiroff, 1981).

The results of the fitness tests indicated that the *Adopters* had levels of physical fitness comparable to those of the *Perennials*. The self-assessments of physical fitness obtained from the group were correlated with the actual results of their fitness tests, indicating that the group were accurate in their perceptions of their fitness levels. This level of accuracy, presumably, was related to the importance which the *Adopters* attributed to the physiological parameters of fitness. It also reflected the extent to which the group, as a whole, emphasized the constant monitoring and evaluation of their physical performance. Assessment was accomplished by means of regular reference to, and competition with, their own recent achievements in

performance, rather than in relation to competition or comparison with others.

A concern with decrements in physiological functioning and changes in body shape and appearance, considered typical of middle-aged men, appeared to be influential in the *Adopters'* development of aspects of identity based on involvement in exercise. It was also apparent that the current emphasis on physical activity in society, and the involvement of others in regular exercise, were important influences on the decision of the *Adopters* to adopt a more active lifestyle. A number of the men reported their awareness of the promotion of physical activity in the media, and their recognition that peers were leading more active lives. A decision to emulate others appeared to be a precursor in a process of social learning in which an identity as an *Adopter* was acquired.

The need to establish a differentiated identity, based on distinctiveness, has been identified as an important characteristic of a man at mid-life (Erikson, 1960). The approach of mid-life, and the processes with which it is associated, appeared to provide an appropriate means with which to interpret the significant changes in involvement in physical activity which each of the *Adopters* reported. The group, as a whole, reported using physical activity consciously as a means of coping with the stress inherent in everyday life. However, at a more encompassing level, it appeared that involvement in physical activity, through a variety of mechanisms, provided an effective means with which the *Adopters* coped with the stress accompanying the characteristics associated with the advent of mid-life. For the *Adopters*, it appeared that the modification of identity as a result of involvement in physical activity provided the means necessary to cope with the *Mid-Life Transition*, and its association with physical decline.

THE REJECTORS

The eleven members of a third group identified in the study were not involved in any regular exercise. Although some of the men reported participating in various physical activities,

the *Rejectors* were involved on a sporadic basis. Each of the group members had maintained this pattern since young adulthood, and several of the men recalled their efforts to avoid involvement in organized sport throughout their early lives.

The *Rejectors* described their awareness of a decrease in physical capabilities which they associated with their increasing age. However, for the majority of the group, this realization did not appear to cause a great deal of concern. Each of the group members demonstrated their awareness of the benefits which are commonly associated with involvement in regular physical activity, and all appeared to have a positive attitude towards fitness and exercise. However, each of the men chose not to be involved in regular physical activity. A continued level of inactivity appeared to be based on the rationalization that physical fitness and physical activity were not as important as other aspects of their lives in which they had invested commitment. This rationalization also appeared to provide a means to effectively dissipate any anxiety associated with feelings of guilt or remorse which may have been associated with the awareness of the effects of their physical inactivity. Cognitive dissonance in this area of their lives was reduced by directing attention towards other spheres of life in which achievement was valued.

The definitions of physical fitness provided by the *Rejectors* overwhelmingly emphasized a view of fitness as the absence of signs of disease or disability. Despite the application of these criteria, the *Rejectors* rated their levels of cardiovascular functioning and muscular endurance significantly lower than the self-assessments provided by the *Perennials*. The results of the fitness tests supported these assessments, with the *Rejectors* recording levels of cardiovascular functioning and muscular endurance significantly lower than those recorded by the *Perennials*. The level of accuracy of the *Rejectors* in predicting their levels of cardiovascular functioning and muscular endurance was not indicative of that associated with both body-composition and flexibility. Once again, the *Rejectors*, who knew they were physically unfit, accepted the situation as a result of the minimal significance which they accorded to the physical aspects of their identities. The definitions of fitness which they

provided clearly illustrated the way in which minimal standards could be set and, more importantly, met.

The concern with changing body shape and appearance which was reported by the more active men who participated in the study was also reported by the *Rejectors*. However, the *Rejectors* expressed significantly less satisfaction with their body shape and appearance than the other men who participated in the study, even though their physiques were not significantly different. This finding suggested that it is the *perception* of involvement in physical activity which is important to an individual rather than the fitness levels which result (Heaps, 1978). The fact that the *Rejectors* had chosen not to take any action which would allow them to change the perceptions of their bodies was further indicative of the minimal value which they attributed to physical fitness, physical activity and related concerns.

It was not surprising that the *Rejectors* saw no relationship between involvement in physical activity and the reduction of stress. The *Rejectors'* avoidance of any regular involvement in exercise was characteristic of a life and personal environment in which physical activity was regarded to be unimportant. The *Rejectors* invested meaning in other aspects of life and choices made in relation to occupational, familial and personal interests resulted in a life based on a hierarchy in which involvement in physical activity did not begin to compete for status. Although concern with physical aspects of identity were evident in a number of different areas, the *Rejectors* clearly reflected the mechanism through which these concerns could be distanced from valued aspects of identity.

THE RELEGATORS

Seven men comprised the fourth and most heterogeneous group identified in the study. The group was composed of four men under the age of thirty-seven, one man aged forty, one man aged forty-two, and two aged forty-five. As a result of these differences in age, the issues of the *Mid-Life Transition* were less evident in the information which the men provided.

However, the ages of the men, and their reported levels of involvement in physical activity provided a number of insights into the role of physical activity in life before and after the *Mid-Life Transition*.

The *Relegators* reported levels of involvement in physical activity lower than those reported by the *Rejectors*. However, in contrast to the *Rejectors*, each of the *Relegators*, had been actively involved in regular exercise within the period several years prior to the interview.

The younger men, in their mid-thirties, had decreased their involvement in regular exercise after leading active lives which were based on participation in a wide range of activities, including competitive sport. The reasons provided to justify their increased levels of inactivity were clearly related to the demands associated with the *Settling Down* period of male adult development (Levinson et al., 1978). This period is concerned with the establishment of a stable life structure, based on the consolidation of the central aspects of life. These typically include marriage, family and occupation. Each of the younger *Relegators* had completed a doctoral degree within the three years prior to the interview and each man was working towards gaining tenure within his respective departments. In addition, each of the men had young children. The demands associated with both occupational and familial responsibilities had resulted in a reordering of priorities within the life structure. One result of this process was a decrease in the emphasis placed on involvement in physical activity. It was interesting to note that one man had begun to question his intense commitment to his academic future, at the expense of other aspects of life, and clearly articulated his belief that his value system was undergoing change. The *Relegator* believed that the result of this change would soon be evident with a renewed involvement in regular exercise.

The older men in the group had also reduced their levels of involvement in regular exercise. In contrast to the younger *Relegators*, these men did not identify specific factors in their lives which had resulted in their decreased levels of involvement in physical activity. Each of the men, approaching his mid-forties, appeared to have decided that involvement in exercise

was not as important as it had seemed to be several years earlier. These men had placed little emphasis on involvement in physical activity throughout young adulthood, and it appeared that the involvement in physical activity reported in their early forties had been quite uncharacteristic. This was also reflected in the justifications of their more recent inactivity which did not extend beyond a belief that the demands of other areas of life had resulted in time no longer being available for involvement in exercise.

The definitions of fitness provided by the *Relegators* resembled those of the *Perennials* in their emphasis on feelings of well-being. However, the *Relegators* also emphasised their perceptions of fitness as the ability to engage in strenuous exercise. Although this suggested that the *Relegators* used their past involvement in exercise as a point of reference, this was not supported by their self-evaluations of fitness, which were comparable to those provided by the *Perennials* and the *Adopters*. These predictions proved to be inaccurate estimates of body-composition and cardiovascular functioning, but accurate predictions of muscular endurance and flexibility. The *Relegators* were inconsistent in their performance on the fitness test, with low scores in relation to cardiovascular function and flexibility, and scores comparable to the active men in relation to muscular endurance, and each of the other three groups in relation to body-composition. These findings suggested that a reduction of involvement in physical activity was not associated with the modification of cognitions related to physical fitness and physical activity. Although involvement in exercise was reduced, estimations of level of fitness underwent little change.

The *Relegators*, like the *Rejectors*, showed some indication that physical aspects of identity were salient to identity as a whole. The majority of the group members reported concern with recent changes in shape and appearance. This concern was not reflected in the comments made by one of the youngest men, or by one of the oldest. The younger man believed that shape and appearance, physical activity, and physical fitness, were not important aspects of life, and this belief was based on the centrality of occupational and familial

concerns. The older man, in contrast, believed that the changes in shape and appearance which he was experiencing were part of an aging process which he philosophically accepted. The comments made by each of these men appeared to be particularly relevant, in view of fact that these men represented the upper and lower boundaries of middle-age.

A THEORETICAL PERSPECTIVE

On the basis of the theory related to the process of male adult development which was reviewed in Chapter II, it was initially expected that the group of middle-aged men who were included in this study would reflect the psychosocial characteristics typically associated with the *Mid-Life Transition*. In addition, it was anticipated that some of the men would report an increased involvement in physical activity. The *physically active* men were expected to reflect the importance of regular exercise in their lives through their involvement, an emphasis on physiological performance, a centrality of physical aspects of identity to identity as a whole, and the use of exercise as a means of enabling them to cope with stress. The substantiation of each of these predictions resulted in the identification of a theoretical perspective with which male involvement in physical activity, at mid-life can be considered.

The majority of the information obtained from the men who participated in the study clearly demonstrated a number of the psychosocial characteristics commonly associated with the *Mid-Life Transition*. Comments made by a number of the men succinctly illustrated reviews of the past, appraisals of the present, and modifications in life as a means of shaping the future. The emphasis placed on various characteristics associated with middle-aged men varied significantly between the men. However, it was evident that an emphasis on one aspect of the *Mid-Life Transition* was common to the entire group.

Each of the men who participated in this study described an increased awareness of the passage of time. Although few direct references were made in relation to a personal sense of mortality, many comments were specifically related to the process of aging, and its associated

physical effects. A concern with the physical effects of reaching mid-life was represented by descriptions of changes in shape and appearance, and a perceived decrease in levels of physiological functioning. In view of these findings, it was concluded that *physical aspects of identity* are of great significance to men at mid-life. At a time in life which has been associated with introspection, review, and personal evaluation, each man has to deal with the anxiety associated with an increasing awareness that physical aspects of identity are changing. *Identity* evolves throughout life, and its relationship with *mind* and *body* becomes a primary focus of deliberation at mid-life.

Although each man has to face the anxiety associated with an awareness of the changes in physical aspects of identity which signify the passage of time, men respond differently. The results of this study identified three major ways in which a reduction of the stress associated with physical aspects of identity at mid-life can be dissipated. Firstly, men who are active prior to the advent of middle-age *reinforce* their involvement in regular physical activity. Secondly, some men who are inactive in the years prior to mid-life *adopt* a more active lifestyle which includes regular involvement in exercise. Finally, the remainder of men who lead inactive lives prior to reaching middle-age, *devalue* the importance of physical fitness and physical activity, and continue to lead sedentary lives. The combination of these three processes, *reinforcement*, *adoption*, and *devaluation*, provides the basis of a theoretical perspective which has not previously been considered in attempts to conceptualize male involvement in exercise at mid-life.

REINFORCEMENT OF INVOLVEMENT IN PHYSICAL ACTIVITY

A number of men who have been involved in regular physical activity for many years, have a self-concept and identity in which *physical aspects of identity* occupy a central place. As a result of this situation, involvement in physical activity serves a variety of functions which ultimately influence identity as a whole. For these men, one crucial aspect of involvement in

regular exercise is the extent to which it provides a sense of competence and confidence in physical, and mental, capability. As a result of this situation, involvement in physical activity becomes a reliable and constant source of self-esteem.

In view of the contribution made to self-esteem by involvement in regular exercise, physical aspects of identity are highly valued by these men. The body is regarded to be an integral part of self, and is considered to be complementary to the valued non-physical aspects of identity which also provide a source of self-esteem. For these men, a great deal of time, energy and enthusiasm is invested in their participation in physical activities, and exercise provides an indispensable contribution to the quality of life. The increased emphasis on physical fitness and physical activity throughout current North American society has little impact on these men. However, the endorsement and promotion of physical aspects of identity constitute the 'legitimization' of a lifestyle which these men have valued for many years.

Involvement in regular physical activity does not preclude the advent of the changes in physical aspects of identity which accompany the advent of mid-life. Consequently, these highly active men are also faced with the realization that time is passing, and that the aging process is affecting their lives. Despite their involvement in regular physical activity, these men experience an increased need for reassurance that they are coping with the effects of the aging process. In view of their past lack of emphasis on the aspects of physiological functioning which are associated with involvement in regular exercise, their attention is directed towards comparison with others. These comparisons are actively sought, and reflect an emphasis on personal evaluation in relation to others who may be dissimilar in regard to age or physical ability. These comparisons provide a means to ensure a sense of distinctiveness, and of differentiated identity (Erikson, 1960). In addition, they provide a means of ensuring that physical aspects of identity, which have always been valued, continue to provide a reliable source of self-esteem.

Men who are committed to an active lifestyle before the advent of middle-age are

confronted with the concerns about physical aspects of identity which are experienced by other men at mid-life. However, the centrality of physical aspects of identity to identity as a whole result in subtle, but important, changes in relation to involvement in exercise. These result in a *reinforcement* of the commitment to regular involvement in physical activity.

ADOPTION OF INVOLVEMENT IN PHYSICAL ACTIVITY

The *adoption* of regular involvement in physical activity at mid-life is associated with a number of previously inactive men who, uncharacteristically, begin to attach a great deal of importance to physical aspects of identity. This situation is a result of an increasing concern over an awareness of the effects of the aging process on the body — an aspect of identity which previously received little attention.

For these men, the concern with physical aspects of identity is amplified with an evaluation of present physical status, and the realization that their past lifestyle contributed to premature deterioration of their bodies and physical capabilities. In view of an awareness that they have neglected physical aspects of their identities in the past, these men become involved in regular physical activity as a means of denying the effects of the aging process (Colarusso and Nemiroff, 1981). The establishment of involvement in regular physical activity has important psychological significance as an attempt to redress the balance between the emphasis previously placed on physical and non-physical aspects of identity. The current emphasis on physical fitness and physical activity in modern society also reflects the affirmation of personal concern with the physical aspects of identity, and contributes to a conducive environment in which involvement in exercise can be pursued.

Men who become involved in regular exercise at mid-life, in view of their concern with the physical aspects of identity, place a great deal of emphasis on the physiological benefits of physical activity. The importance of these benefits overshadowed others, such as a variety of psychological benefits, which may be recognized. These men initiate their involvement in

exercise as a means of gaining reassurance that previous losses in physiological functioning are not irretrievable. Consequently, their involvement in exercise can be characterized by an emphasis on the assessment of personal levels of physiological functioning. From this perspective, comparisons with others are perceived to be of little value. In order to assess the effects of the aging process over time, a means of *body monitoring* is implemented (Neugarten, 1979). Although valuable, standardized tests of fitness cannot be utilized on a day-to-day basis. However, personal physical performance can be easily assessed, and can be used to gain reassurance that achievements of physical performance are constant or improving, *despite* increasing age and an inactive past.

Men who become involved in regular physical activity at mid-life provide a clear example of the way in which physical activity can be used to cope with a *mid-life crisis* precipitated by a sudden realization that non-physical aspects of identity are ultimately influenced by physical aspects of identity. The *adoption* of regular involvement in physical activity is perceived as the most rapid means of redressing past imbalance in these areas, and of dissipating concern about increasing age.

DEVALUATION OF FITNESS AND EXERCISE

The inactive men who do not increase their involvement in physical activity at mid-life constitute the majority of the male population. Although these men are not involved in regular physical activity, they are involved in a wide range of activities on a sporadic basis. In addition, there are differences within the group in relation to the extent of involvement in physical activities. Whilst some men may have actively avoided involvement in exercise since their early lives, others may be occasionally involved in seasonal sports. Although there may be significant differences between the men, they share two common characteristics.

Firstly, the great majority of the men have a positive attitude towards physical fitness and physical activity (Burgess, 1973). The disparity between attitudes towards exercise and

involvement in physical activity has drawn the attention of a number of researchers (Sedgewick, 1980). However, it would appear to be extremely difficult to identify a rationale with which a man could support a *negative* attitude towards fitness and exercise. The psychological and physiological benefits associated with involvement in exercise are widely reported and accepted by the majority of the population, including inactive men. The ability to resolve discordant attitudes and behaviour is dependent on the second characteristic which is common to inactive men.

Physical aspects of identity are not central to the identities of inactive men. Physical fitness and involvement in physical activity are considered to be unimportant in the lives of these men. Time, energy and enthusiasm are committed to other *non-physical* aspects of life and identities in these areas reflect the extent to which they are valued. However, the advent of middle-age results in the concerns experienced by other middle-aged men in relation to an awareness of the changes in shape and appearance, and the decreases in physical functioning which are perceived to accompany the aging process. This situation produces an increased awareness of the disparity between the emphasis placed on physical and non-physical aspects of identity.

Unlike the inactive men who react to this situation with the adoption of involvement in regular physical activity, these men continue their low levels of involvement in exercise. This situation is maintained despite an awareness of the physiological and psychological benefits of exercise, despite an awareness of low levels of personal fitness, and despite dissatisfaction with body shape and appearance. However, although the situation remains overtly unchanged, a subtle but important change occurs in relation to the perception of physical fitness and physical activity. Although these men may not decrease anxiety related to the aging process with involvement in exercise, cognitive dissonance associated with the situation must be reduced. Consequently, these men further *devalue* the importance of fitness and exercise in their lives. Minimal criteria are set in relation to physical fitness in order that they can be readily attained.

In addition, physical fitness and involvement in physical activity are considered to be unimportant. Consequently, physical aspects of identity occupy a peripheral, if not marginal, place in identity as a whole.

CONCLUSION

A review of the material obtained from the men who participated in this study in relation to the theory of male adult development resulted in the identification of a theoretical perspective in which male involvement in physical activity at mid-life can be considered. The perspective is based on the relationship between the increased awareness of physical aspects of identity at mid-life, and the ways in which associated anxiety can be dissipated. Three mechanisms through which this can be accomplished were identified. Physical fitness and involvement in physical activity can be *reinforced, adopted, or devalued*.

The final chapter, Chapter IX, will provide a summary and highlight the conclusions of this dissertation. In addition, a number of implications and recommendations will be considered.

Chapter IX

SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

SUMMARY AND CONCLUSIONS

The primary objective of this research project was to investigate the relationship between the advent of middle-age in men and involvement in regular physical activity. More specifically, middle-age and fitness, identity, and coping with stress were examined in detail in an attempt to provide a theoretical framework within which male involvement in physical activity, at mid-life, could be considered.

The project was based on thirty-eight male university staff members aged between thirty-five and forty-five. Data were obtained with the use of a focussed interview, which included open-ended questions related to various aspects of involvement in exercise, fitness, body shape and appearance, stress, and the promotion of physical activity. The interview also included two questionnaires; one which was included to assess the centrality of physical aspects of identity to identity as a whole, and another to measure of personality orientation which has been associated with effective coping with stress. In addition, self-rating scales were used to enable each man to rate his body-composition, cardiovascular functioning, muscular endurance and flexibility in relation to other men of the same age. At a later date, each man underwent a standardized test of physical fitness, based on the four dimensions of fitness identified above. Finally, eight men, chosen as a result of their different levels of involvement in physical activity, provided detailed descriptions of the events of a 'typical day'.

The adoption of this multi-faceted approach resulted in the identification of four groups of men. The eleven *Perennials* had been involved in physical activity for many years, and it occupied a central place in their lives. After years of sedentary living, nine *Adopters* had increased their involvement in physical activity as they had reached middle-age. The eleven *Rejectors*, although aware of the physiological and psychological benefits commonly associated

with involvement in physical activity, had been relatively inactive for many years. Finally, having previously led active lives, seven *Relegators* had each decreased their involvement in physical activity in the period several years prior to the interview.

The differences established in relation to the patterns of involvement in physical activity were reflected in each of the areas initially identified for investigation. Firstly, the men differed in relation to the ways in which they defined fitness. The *Perennials* placed a great deal of emphasis on the feelings of well-being which they associated with their involvement, whilst the *Adopters* were primarily concerned with the effects of exercise on physiological functioning. The *Rejectors* regarded fitness to be the absence of signs of disease and disability. Finally, the *Relegators*, like the *Perennials* emphasised feelings of well-being which they associated with physical activity. However, the *Relegators* also emphasized fitness as the ability to engage in strenuous exercise, and this appeared to reflect their reliance on past experience.

It was not surprising that the active men, the *Perennials* and the *Adopters*, were found to be physically fitter than the inactive men. The active men also rated their fitness levels more highly than the *Rejectors*. However, the *Relegators* provided estimates of fitness which resembled those obtained from the inactive men. This finding suggested that although the *Relegators* had decreased their involvement in physical activity, their cognitions related to fitness and exercise had not undergone similar modification. A comparison between actual and self-assessed levels of fitness produced a number of interesting findings. The *Perennials*, *Rejectors* and *Relegators* were all relatively inaccurate in their perceptions of their levels of fitness. In contrast, the *Adopters* were more accurate, and this reflected their concern with physiological functioning.

The information obtained from the *Perennials* clearly reflected the extent to which physical aspects of identity were central to identity as a whole. The *Who Am I?* test was included for use in the study (Kuhn and McPartland, 1954). Over twenty percent of the responses provided by the *Perennials* were related to physical aspects of identity. The

Perennials expressed their concern with the effects of increasing age, and comparison with others in relation to physical performance appeared to be an important aspect of their current involvement in exercise. Although the *Adopters*' involvement in physical activity had been a relatively recent occurrence, physical aspects of identity had become extremely important to identity as a whole. The increased emphasis which these men had placed on physical aspects of identity appeared to be at least partly due to the current promotion of fitness and physical activity throughout society. The emphasis placed by the *Adopters* on the physiological effects of exercise was further reflected in their reliance on monitoring their physical performance in relation to their own prior achievements.

Four of the men who participated in the study identified themselves as *serious runners*. The involvement in running of these men was initially examined in relation to the concept of *addiction*. However, it was evident that a consideration of the process through which an identity as a *serious runner* was acquired was far more useful in examining involvement in long-distance running. Consequently, ten characteristics of the process through which an identity as a *serious runner* is acquired were identified. The similarity of these characteristics to those associated with people with anorexia nervosa resulted in the conclusion that, despite important dissimilarities between *serious running* and anorexia nervosa, several characteristics underlying each phenomenon are similar.

Physical aspects of identity were not highly valued by the *Rejectors*. Physical fitness and physical activity were considered to be unimportant aspects of life and were accorded little significance. The *Rejectors* rated their satisfaction with body shape and appearance significantly lower than the remainder of the men, although the results of the fitness tests indicated that there were no differences between the groups in relation to body-composition. This finding provided further support for the lack of importance which the *Rejectors* attributed to physical aspects of identity. The *Relegators* also reflected lives in which physical aspects of identity were of low priority. However, the results of the *Who Am I?* test indicated that the *Relegators*

provided more responses related to physical aspects of identity than either the *Adopters* or the *Rejectors*. Although the *Rejectors* appeared to value physical aspects of identity, involvement in regular exercise had been reduced as other aspects of life had assumed higher priority.

The active men who participated in the study believed that regular involvement in physical activity enabled them to cope with the stress inherent in everyday life. In addition, they described a variety of ways in which they used exercise for this purpose. The *Rejectors* saw no relationship between physical activity and the reduction of stress. Similarly, personal experience had left the *Relegators* unconvinced of such a relationship. Research which has examined the association between involvement in exercise and the reduction of stress reveals little consensus over the mechanisms underlying such a relationship (Morgan, 1980). The results of this study indicated that, from an existential perspective, involvement in exercise was an important means of *control*, *commitment* and *challenge*. An association between these factors and an ability to cope with stress has been well documented (Kobasa, 1982). The *Sense of Coherence* can be regarded as an orientation to life which is associated with effectively coping with stress (Antonovsky, 1982). Although an operationalization of the *Sense of Coherence* did not reveal any differences between the groups, it was evident that involvement in physical activity did provide the means for the acquisition of *Generalized Resistance Resources* (Antonovsky, 1979).

The qualitative material obtained from the men who participated in this study, as a whole, contained an underlying emphasis on a number of psychosocial processes commonly associated with men at mid-life, and the process of male adult development (Levinson et al., 1978). These characteristics, and their relationship to fitness, identity and coping with the stress associated with the perceived physical effects of aging, provided a means for viewing participation from a perspective not previously utilized in research in this field.

Each of the men who participated in this study described an increased awareness of the passage of time. Although few direct references were made in relation to a personal sense of

mortality, many comments were specifically related to the process of aging, and its associated physical effects. A concern with the physical effects of reaching mid-life was represented by descriptions of changes in shape and appearance, and a perceived decrease in levels of physiological functioning. In view of these findings, it was concluded that *physical aspects of identity* are of great significance to men at mid-life. At a time in life which has been associated with introspection, review, and personal evaluation, each man has to deal with the anxiety associated with an increasing awareness that physical aspects of identity are changing. *Identity* evolves throughout life, and its relationship with *mind* and *body* becomes a primary focus of deliberation at mid-life.

Although each man has to face the anxiety associated with an awareness of the changes in physical aspects of identity which signify the passage of time, men respond differently. The results of this study identified three major ways in which a reduction of the stress associated with physical aspects of identity at mid-life can be dissipated. Firstly, men who are active prior to the advent of middle-age *reinforce* their involvement in regular physical activity. Secondly, some men who are inactive in the years prior to mid-life *adopt* a more active lifestyle which includes regular involvement in exercise. Finally, the remainder of men who lead inactive lives prior to reaching middle-age, *devalue* the importance of physical fitness and physical activity. Two of these mechanisms have clear implications for involvement and continue to lead sedentary lives. The combination of these three processes provides the framework of a theoretical perspective which has not previously been considered in attempts to conceptualize male involvement in exercise at mid-life.

IMPLICATIONS

Research related to involvement in physical activity, with few exceptions, has examined group involvement in exercise over a short period of time and identified a variety of characteristics associated with people who are 'active' or 'inactive'. However, the results of this

study clearly demonstrated the inadequacy of such an approach with middle-aged men. Involvement in exercise was shown to be strongly influenced by characteristics associated with a certain period of life. The identification and further development of a theoretical framework, based on this research, should direct the attention of other researchers to the possibility that involvement in physical activity is greatly influenced by factors associated with different periods of the life-course.

The results of this study also have implications for the promotion of physical activity and the design and implementation of exercise programmes. It is evident that the promotion of exercise should reflect a sensitivity to the concerns of different age groups, and different types of individuals within those age groups. Based on the findings of this project, it is apparent that a significant number of middle-aged men may adopt a more active lifestyle as a result of concerns with the effects of aging. Consequently, the promotion of physical activity to middle-aged men, with an emphasis on the physiological benefits commonly associated with regular exercise, may prove to be effective in persuading inactive men with positive attitudes toward physical activity to become *Adopters*.

The characteristics of the four groups of men identified in this study have a number of implications for the designers of exercise programmes, exercise counsellors and exercise instructors. The *Perennials*, who seemed to indicate that they would remain active under any circumstances, may not appear to warrant the attention of programme designers. However, their emphasis on performance, in relation to others suggests that activities providing the opportunity for social comparison may be particularly appropriate. The *Adopters* are undoubtedly a group for which exercise counselling, based on aspects of physiological performance, appears to be warranted. These men clearly demonstrated their interest in fitness levels and performance, and periodic fitness tests and activities which facilitate the measurement of performance would seem to be extremely important.

The *Rejectors* and the *Relegators* both chose not to become involved in exercise, and it

is difficult to assert that efforts to reverse this decision would be successful. However, most of the men who devalue involvement in exercise have been shown to hold positive attitudes towards physical activity. Consequently, an emphasis on the physiological benefits commonly associated with involvement in exercise may result in some of these men becoming more active. This number may be further increased if fitness is represented as a state beyond the absence of signs of disease or disability. Finally, age differences in the *Relegators* suggested that the decision to reduce involvement in exercise may have been associated with characteristics of life different to those experienced by the majority of the sample. Further research is required to identify the relationship between physical activity and other periods of life.

RECOMMENDATIONS

The results of this study clearly demonstrated the utility of examining patterns of involvement in physical activity in one small, relatively homogeneous, group of middle-aged male academics. As a result of this approach, the basis of a theoretical perspective with which to examine the relationship between the advent of middle-age and male involvement in physical activity was identified. The identification of this perspective provides support for the recommendation that other periods of the male life-course, and their relationship with involvement in physical activity, be studied. Research over the past decade has resulted in widely-accepted conceptualization of the major characteristics of the process of male adult development. This perspective appears to hold great potential for the study of involvement in exercise at various stages of the male life course.

The approach adopted in this study also appears to hold potential for the study of involvement in exercise of other groups within society. There is a great need for quality research in the investigation of patterns of involvement in physical activity. Very little is known about the number of people involved in regular exercise and even less is known about why some people choose to lead active lives. Recent national surveys in Canada have shown that people

involved in physical activity are typically young, well-educated men of high socioeconomic status. Consequently, research should be directed towards the majority of society, who are not represented in this description. Research should be designed to investigate the involvement in physical activity of women, and people of both sexes who have low socioeconomic status. Specific, homogeneous groups should be identified in order to study the influence of age, and related characteristics of life, on involvement in regular exercise.

Finally, the results of this study were shown to have a number of practical implications for the promotion, design and implementation of exercise programmes. Consequently, it is recommended that further research of this kind be conducted in order to provide the information necessary for fitness promoters, programme designers and exercise counsellors to make appropriate services available to all members of society.

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APPENDICES

APPENDIX 1: INTERVIEW SCHEDULE

1. I would like you to start by giving me fifteen different answers to the simple question 'Who am I?' Please try and answer the question as if you were answering it for yourself. Don't worry too much about 'logic' or 'importance'. There are no right or wrong answers. We'll try to limit ourselves to 7-8 minutes on this section.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

2(a) How do you define physical fitness?

(b) Now I would like you to tell me how you rate various aspects of your physical fitness in relation to other Canadian men of your age. Body-composition can be regarded as the relationship between lean body tissue and fat. How would you rate your body-composition?

.....
Low High

Cardiovascular functioning can be regarded as the combined efficiency of the respiratory system in taking in oxygen, the circulatory system in delivering the oxygen to the muscles, and the utilization of the oxygen by the muscles to produce energy. How do you rate your cardiovascular functioning?

.....
Low High

3(a) How satisfied are you with the shape and appearance of your body?

• • • • • • • • • •
Low High

(b) Do you think about your shape and appearance often?

(c) Do you think that you have become more or less concerned with your physique in recent years?

4(a) How important is the place of physical activity and physical fitness in your life at the moment?

(b) Do you think that physical fitness and physical activity have become more or less important in your life during the past few years?

5(a) Are you involved in any regular physical activity at the moment? Frequency? Duration? Intensity?

(b) Have you recently increased, or decreased, your involvement in physical activity?

(c) What aspects of physical activity attract you most?

What aspects of physical activity attract you least?

(d) What aspects of your life make it easier for you to exercise regularly?

What aspects of your life make it more difficult for you to exercise regularly?

6(a) To what extent (if at all) do you think that physical activity helps you to cope better with day-to-day problems?

(b) Do you use physical activity, consciously, in this regard?

(c) Have you ever been forced to restrict your involvement in physical activity? If so, how did that make you feel?

7(a) Why do you think that the government, and other interested groups, promote involvement in physical activity?

(b) Do you think that the increased promotion of physical fitness and exercise in recent years has affected the amount of time that you spend exercising?

(c) If it was your job to promote involvement in exercise, how would you do it?

SCORESHEET

NAME:
 AGE:
 TELEPHONE:
 DATE OF INTERVIEW:
 DATE OF FITNESS TEST:
 CASSETTE NUMBER:
 MARITAL STATUS:
 HEIGHT:
 WEIGHT:

RESULTS OF FITNESS TEST

Body
 Composition: %body fat

 Cardiovascular
 Endurance: $\text{ml}^{-1}\text{kg}^{-1}\text{min}^{-1}$

 Muscular
 Endurance: sit ups
 push ups

 Flexibility cm.

PERCEIVED FITNESS

Body
 Composition:

 Cardiovascular
 Endurance:

 Muscular
 Endurance:

 Flexibility

Satisfaction with Body:
 'Who Am I? Responses:
 Mean Rank:
 Sense of Coherence:
 Manageability:
 Comprehensibility:
 Meaningfulness:

ORIENTATION TO LIFE QUESTIONNAIRE

Introduction:

Here is a series of phrases or statements which are completed by anchors, located at the end points of a seven-point scale. Each of the anchors expresses one extreme or the other. In each case, circle the number which best expresses how you feel. If the words under 1 are right for you, circle 1; if those at the opposite extrem under 7 are right for you, circle 7. If 1 is too extreme, but your feeling is close to it, circle 2; and so on.

The questionnaire is anonymous. Thank you for your cooperation.

1. When you talk to people, do you have the feeling that they don't understand you?

1 2 3 4 5 6 7
never have always have
this feeling this feeling

2. In the past, when you had to do something which depended on cooperation with others, did you have the feeling that:

1 2 3 4 5 6 7
it surely wouldn't it surely would
get done get done

3. Think of the people with whom you come in contact daily, aside from the ones to whom you feel closest. How well do you know most of them?

1 2 3 4 5 6 7
 you feel that they you know them
 are strangers very well

4. How often has it happened in the past that you were surprised by the behaviour of people whom you thought you knew well?

1 2 3 4 5 6 7
never happened always happened

5. Has it happened that people whom you counted on disappointed you?

1 2 3 4 5 6 7
 always happened never happened

6. Life is:

1 2 3 4 5 6 7
 full of interest completely routine

7. Until now your life has had:

1 2 3 4 5 6 7
 no clear goals or very clear goals
 purpose at all and purpose

8. In the past ten years your life has been:

1 2 3 4 5 6 7
 full of changes without completely consistent
 your knowing what will and clear
 happen next

9. Most of the things you do in life are:

1 2 3 4 5 6 7
 completely deadly
 fascinating boring

10. What best describes how you see life?

1 2 3 4 5 6 7
 one can always find there is no solution
 a solution to painful to painful things
 things in life in life

11. When you think about your life, you very often:

1 2 3 4 5 6 7
 feel how good it ask yourself why you
 is to be alive bother to exist at all

12. When you face a difficult problem, the choice of a solution is:

1 2 3 4 5 6 7
always confusing always completely
and hard to find clear

13. Doing the things you do every day is:

1 2 3 4 5 6 7
a source of deep pleasure a source of pain
and satisfaction and boredom

14. Your life in the future will probably be:

1 2 3 4 5 6 7
full of changes without completely consistent
your knowing what will and clear
happen next

15. When something unpleasant happened in the past, your tendency was:

1 2 3 4 5 6 7
to 'eat yourself up' about it to say 'ok, that's that,
I have to live with it'
and go on

16. When you do something that gives you a good feeling:

1 2 3 4 5 6 7
it's certain that you will it's certain that
something will
go on feeling good happen to spoil the feeling

17. You anticipate that your personal life in the future will be:

1 2 3 4 5 6 7
totally without meaning full of meaning
and purpose and purpose

24. Very mixed-up feelings and ideas:

1 2 3 4 5 6 7
very often very seldom
or never

25. Feelings that you're not sure you can keep under control:

1 2 3 4 5 6 7
very often very seldom
or never

26. The feeling that you don't have a completely clear idea of what's going on:

1 2 3 4 5 6 7
very often very seldom
or never

27. The feeling that there's little meaning in the things that you do in your daily life:

1 2 3 4 5 6 7
very often very seldom
or never

28. Feelings inside that are incompatible with each other:

1 2 3 4 5 6 7
very often very seldom
or never

29. A feeling that you're being treated unfairly:

1 2 3 4 5 6 7
very often very seldom
or never

37. Considering all aspects of your health, would you say that you require:
- a. no particular health-related action
 - b. efforts at reduction of known risk factors
 - c. observation, supervision or investigation by a physician
 - d. active therapeutic intervention by a physician
38. If you have given the first answer to all four of the previous questions (no pain, no limitation, etc.), one further question is in order. Would you say that your state of health goes beyond this, that you feel an abundance of energy, that you were what people call a picture of perfect health?
- a. definitely
 - b. possibly
 - c. no
 - d. did not give the first answer to all four questions

Thank You Very Much For Your Cooperation

APPENDIX 3: ADVERTISEMENT

Volunteers Required for Physical Activity Study

Male, University of Alberta Staff, between the ages of 35 and 45 are needed for a study of social-psychological aspects of involvement and non-involvement in physical activity. The study includes a comprehensive fitness test conducted by the University's Fitness Unit and a one-hour interview. A wide range of fitness levels is required. The contact person is Michael Dixon, Department of Physical Education and Sport Studies, 432-5503 or 471-5538.

APPENDIX 4: CORRESPONDENCE

Department of Physical Education and Sport Studies
University of Alberta
Edmonton, Alberta
Canada T6G 2H9

NAME
DEPARTMENT
ADDRESS
DATE

Dear NAME

I am currently conducting a study concerned with various aspects of physical fitness and involvement in physical activity. As a result of your association with the staff fitness programme, you would be an ideal person to include in the study. The project involves an interview (lasting for approximately one hour) and a comprehensive fitness test conducted by the University of Alberta Fitness Unit. If you are between 35 and 45 years of age and a full-time academic staff member, I would be very grateful if you would consider participating in the study. As a member of faculty, you will be eligible for the remission of the fees associated with the fitness test. All information from both the interview and the fitness test will, of course, be confidential and you will have the option to withdraw from the study at any time.

There is also another matter with which I require your help. Understandably, it is a more difficult task to obtain information from men who are not particularly interested in physical fitness and physical activity. However, I would also like to include these men in the project. If you know somebody who falls into this category, and fulfils the criteria outlined above, I would greatly appreciate it if you could ask him to contact me. Alternatively, you could pass me his name in order for me to contact him directly.

I will try to contact you by telephone within the next few days, and I hope you will agree to be included in the study. I can be reached on 432-5503 (b) or 471-5538 (h).

Yours sincerely,

Michael J. Dixon
Ph.D. Candidate

Department of Physical Education and Sport Studies
University of Alberta
Edmonton, Alberta
Canada T6G 2H9

NAME
DEPARTMENT
ADDRESS
DATE

Dear NAME

Thank you for agreeing to help me with the study I am conducting. As I mentioned on the telephone, the project is concerned with various aspects of physical fitness and involvement in physical activity. It consists of two parts. The first is the interview which we have arranged for DATE and TIME. It will involve open-ended questions, five self-rating scales and two short questionnaires. All information will, of course, be confidential, and you will have the option to withdraw from the study at any time. The fitness test will take place after the interview and I will give you further details about booking the test when I meet with you.

Should you need to contact me for any reason, I can be reached on 432 5503. Once again, thank you for agreeing to help me out. I am looking forward to meeting you on DAY and DATE.

Yours sincerely,

Michael J. Dixon
Ph.D. Candidate

Department of Physical Education and Sport Studies
University of Alberta
Edmonton, Alberta
Canada T6G 2H9

NAME
DEPARTMENT
ADDRESS
DATE

Dear NAME

Although it is now some time since we had our interview, I notice that you have not, as yet, been able to have your fitness test. I realize that you have many things to do at this time of the year NAME, and appreciate that I have already made demands on your time. However, it is essential to my study that you have the fitness test as soon as possible. Without the results from your fitness test, I cannot include the valuable information which you provided in the interview in the study.

I would like to begin the data analysis as soon as possible, and so I would really appreciate you taking the fitness test at your earliest convenience. The number of the Fitness Unit is 4435, and appointments can be made for any time between 9am and 9pm. I sincerely hope that you will be able to find the time to take the fitness test in the next few days. Please feel free to call me on 5503 if you have any questions or concerns.

Kind regards,

Michael J. Dixon
Ph.D. Candidate

Department of Physical Education and Sport Studies
University of Alberta
Edmonton, Alberta
Canada T6G 2H9

NAME
DEPARTMENT
ADDRESS
DATE

>Dear NAME

In our recent telephone conversation I gave you a brief outline of one further aspect of my research. As I indicated, I would like to include in my dissertation a detailed description of a typical day in the life of a number of the men who took part in the study. I very much appreciate your willingness to help me and I hope the requirements do not cause you too much inconvenience.

As I explained on the telephone NAME I would like you to keep as an accurate a record as possible of all your activities for the day in question. Although you are free to decide how you would like to accomplish this please work chronologically through the day, beginning with the time you got up and ending with the time you went to bed. Please be as accurate as possible in recording times and activities. I would also appreciate you recording what you ate (including snacks!) and what you drank (including alcohol!). If you are a smoker, could you also make a note of when you have a cigarette. Please feel free to describe how you felt at any particular time during the day. Please don't modify your routine in any way in order to 'please' me. In particular, if you weren't planning to do any exercise that day *don't* do any for my benefit! If you did plan to do some, I would really appreciate you recording the when, where, how, why and with whom it took place.

If you have any questions NAME please contact me. You can leave a message at 5503(w) or 471-5538(h). Finally, as with all other information you have given me, this information will be strictly confidential. In the final report, any information at all which may identify you will be changed appropriately. Once again, thank-you for your help and I am looking forward to seeing you next DATE AND TIME.

Kind regards,

Michael J. Dixon
Ph.D. Candidate

APPENDIX 5: RAW DATA

01 1 39 121 70 M 22.5 60 24.5 28.5 80 80 60 50 42 43 36 185 80.2
02 1 37 144 70 D 15.0 56 45.0 23.0 80 70 60 40 49 53 42 178 81.1
03 4 35 152 70 M 18.3 35 23.5 25.0 80 70 60 60 50 54 48 170 57.1
04 1 43 168 80 D 25.0 43 23.0 08.0 70 80 80 60 61 55 52 173 69.3
05 4 42 144 80 S 18.2 28 26.0 23.0 80 60 70 80 49 55 40 181 67.5
06 1 42 157 40 M 28.2 30 27.0 --- 50 70 60 -- 55 55 47 177 87.8
07 2 35 122 40 M 20.6 47 34.5 18.3 50 80 70 20 36 40 46 168 69.7
08 2 43 163 60 M 16.1 42 38.0 48.0 90 50 60 80 56 60 47 170 61.6
09 3 42 173 60 M 24.3 31 32.5 25.2 80 60 60 50 64 56 53 171 61.2
10 3 43 153 60 M 28.3 34 18.5 32.0 80 70 70 60 51 57 45 189 87.7
11 2 37 160 40 M 25.2 23 25.5 28.3 30 70 50 50 61 57 42 180 93.1
12 3 41 157 50 M 26.1 28 20.5 27.0 60 60 50 60 55 54 48 169 64.0
14 1 38 148 80 M 14.7 52 47.5 30.0 80 80 70 50 55 52 41 175 65.2
15 3 40 143 30 M 28.8 32 13.5 27.7 20 30 20 30 51 47 45 181 100.8
16 3 37 120 60 M 24.1 30 12.5 41.2 40 30 20 50 39 44 37 170 70.2
17 2 40 156 80 M 18.0 66 29.0 36.5 80 90 80 60 53 55 48 165 60.7
18 3 43 136 50 M 17.2 44 20.0 27.8 90 30 50 20 37 52 47 187 69.4
19 2 42 160 70 M 25.6 40 31.5 13.3 40 80 80 10 56 53 51 183 83.2
20 2 38 142 70 M 18.9 46 32.5 22.1 80 80 60 30 48 49 45 179 66.6
21 3 38 115 40 S 18.6 26 27.5 28.0 70 70 60 70 33 47 35 180 73.8
23 1 35 101 80 D 18.3 46 19.0 14.9 90 90 60 10 42 39 30 180 83.2
24 3 41 174 30 M 31.0 32 25.0 40.5 70 60 60 40 63 57 54 180 96.3
25 3 40 153 40 M 26.6 39 15.0 13.7 80 50 30 30 57 51 45 175 60.7
26 2 42 152 70 D 29.3 49 39.5 29.0 70 60 80 70 49 53 50 171 88.2
27 1 45 162 90 M 24.6 39 21.5 31.8 70 70 80 60 58 55 49 179 73.2
28 3 35 156 30 M 28.3 35 11.0 24.8 30 50 30 30 53 52 51 172 103.5
29 1 37 158 50 D 24.0 38 28.0 47.5 80 70 70 80 56 58 44 185 77.8
30 1 45 168 60 M 22.6 37 21.0 15.5 70 70 60 60 62 59 47 186 86.8
31 2 44 150 70 M 24.3 33 23.0 29.5 40 50 30 40 51 51 48 170 69.3
32 2 42 136 40 M 26.7 47 28.0 34.0 30 60 60 50 50 46 40 180 95.0
33 4 45 156 70 M 26.8 29 18.0 14.0 70 60 60 50 55 54 47 182 74.7
34 1 42 156 40 M 24.8 45 28.0 33.7 30 40 60 30 59 51 46 183 87.3
35 4 35 163 50 M 23.9 38 32.5 28.8 90 90 70 70 59 52 52 178 79.6
37 4 35 142 70 M 24.1 46 34.0 18.8 70 80 80 30 48 46 48 178 72.0
38 4 40 140 50 M 22.4 36 25.0 28.1 60 60 60 60 47 50 53 183 71.5
39 3 42 149 30 M 25.9 35 13.5 34.6 30 50 50 40 54 52 43 168 81.0
40 1 38 145 60 M 21.3 50 23.0 28.8 70 80 40 20 54 46 45 174 69.7
41 4 45 140 40 M 21.7 36 17.5 07.4 40 30 30 30 53 48 39 173 79.7

KEY: Reading from left to right, the variables are as follows:

Case, Group, Age, Sense of Coherence, Body Image, Marital Status, Body-Composition, Cardiovascular Endurance, Muscular Endurance, Flexibility, Perceived Body-Composition, Perceived Cardiovascular Endurance, Perceived Muscular Endurance, Perceived Flexibility, Comprehensibility, Manageability, Meaningfulness, Height and Weight.